International Economic Issues

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SUBSIDIES AND INTERNATIONAL TRADE: THE PROVINCIAL AND STATE DIMENSIONS

Overview of Provincial and State Subsidies: Their Implications for Canada-U.S. Trade
by Murray G. Smith

Analysis of Provincial Transfer Payments to Business in Canada
by Jean-François Bence

The Economic Development Policies of U.S. State and Local Governments: Implications for the Canada-U.S. Free Trade Agreement
by Earl H. Fry

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SUMMARY

Murray G. Smith

Subsidies and countervailing duties became contentious international issues in the 1980s. Subsidies have been recognized to be an acute problem in agricultural trade in successive statements by ministers meeting at the Organization for Economic Cooperation and Development and the G-7 Summit leaders have made repeated pledges to dismantle farm subsidies. Although the global agricultural trade war has been a source of bilateral frictions, differences have also arisen between Canada and the United States over allegations of subsidies and the application of countervailing duties in the industrial sector. The issue of developing rules for subsidies and countervailing duties was particularly contentious in the Canada-U.S. Free Trade Negotiations and nearly precipitated the collapse of the trade talks in the final stages.

The first paper in this issue provides an overview of provincial and state subsidies and examines the conceptual issues in determining which subsidies or assistance measures affect trade. Smith's paper observes that the issue of measurement of subsidies is closely related to the purpose of the measurement. The definition of which subsidies have "harmful effects on trade" is very ambiguous. For example, one of the most contentious subsidy issues, the alleged stumpage subsidy which was the key issue in the 1986 Softwood Lumber dispute, involves a provincial government practice. In addition, differences in the types of policy instruments used by provinces, states and local governments make it difficult to compare the subsidy and assistance practices in Canada and the United States. For example, Canadian provinces are more likely to use grant programs while American states and local governments use industrial development bonds and tax abatements.

Bence's contribution examines the evolution of provincial subsidies in Canada drawing on the National Accounts data and the public accounts of the provincial governments. He concludes that provincial subsidies have become relatively more significant as federal expenditures have been curtailed in response to pressures from deficits and mounting debt. In aggregate provincial subsidies now amount to about one-third of federal subsidies or about .25 per cent of the value of shipments in the Canadian economy. He notes that provincial subsidies are concentrated in the agricultural sector as are federal subsidies, but it is difficult to determine the impact on trade flows of provincial measures in other sectors.

Fry surveys the wide range of state initiatives and incentive measures that are being implemented by a growing number of states to promote their economic development and to respond to global competion. Many states utilise a variety of policy instruments, but there is a paucity of data on the overall economic impact of these many state practices.

Negotiations now underway in the Uruguay Round of multilateral GATT negotiations and prospective negotiations mandated under Chapter 19 of the Canada-U.S. Free Trade

Agreement could have important implications for the practices of provinces, states and local governments. In particular, agricultural subsidy and trade issues are one of the key issues in the Uruguay Round of GATT negotiations, and the results of these negotiations could have significant implications for the practices of provinces and states. With the Uruguay Round negotiations scheduled to end by December 1990, the issues of agricultural subsidies will need to be dealt with in the immediate future.

The softwood lumber issue, also could reemerge as a difficult issue in Canada-U.S. economic relations. With the appreciation of the Canadian dollar since 1986 and slumping markets for housing construction in North America, the Canadian industry is likely to press for renegotiation or termination of the Memorandum of Understanding negotiated on New Years Eve 1986, which resulted in a 15 per cent export tax on most Canadian lumber exports to the United States.

Policy diversity and experimentation at the provincial and state level may be desirable in responding to growing global competition. However, the ambiguity of the existing international trade rules about subsidies and countervailing duties makes it difficult to determine when provincial and state measures are healthy competition and when they result in destructive rivalry and can lead to debilitating trade frictions. With growing globalization of the world economy, the practices of provinces and states are likely to become more prominent on the international negotiating agenda.

ABRÉGÉ

Murray G. Smith

Au cours des années 1980, les subventions et les droits compensateurs ont créé de nombreux remous sur la scène internationale. Dans une série de déclarations successives, aux rencontres de l'Organisation pour la coopération et le développement économique, les ministres de divers pays ont reconnu que les subventions constituaient un problème épineux pour le commerce des produits agricoles. De leur côté, les Sept Grands se sont engagés à plusieurs reprises à démanteler le réseau des programmes de subventions. Bien que les escarmouches continuelles sur le marché mondial des produits agricoles aient été à l'origine de frictions bilatérales, le Canada et les États-Unis ont également montré qu'ils ne percevaient pas de la même façon les subventions et le recours aux droits compensateurs dans le secteur industriel. L'élaboration de règles applicables aux subventions et aux droits compensateurs a fait l'objet de discussions particulièrement houleuses lors des négociations canado-américaines sur le libre-échange et on a échappé de peu à l'échec des pourparlers au moment même où ils étaient sur le point de se terminer.

Le premier article de ce numéro entreprend un survol des subventions en vigueur dans les provinces et les États, et analyse les problèmes conceptuels qui se présentent lorsqu'on doit déterminer quelles subventions ou mesures d'aide faussent les échanges. Dans son article, M. Smith souligne que la façon dont on mesure des subventions a d'étroites affinités avec le but de l'exercice. En effet, identifier les subventions qui ont des «effets néfastes sur le commerce» est une tâche particulièrement délicate. Ainsi, une des questions les plus chaudes à cet égard, celle de la prétendue subvention sur les droits de coupe, axe moteur du litige de 1986 sur le bois de construction, concerne une pratique du gouvernement provincial. De plus, la diversité des politiques auxquelles recourent les provinces, les États et les autorités locales complique la comparaison entre le Canada et les États-Unis pour ce qui est des subventions et des mesures d'aide. Les provinces canadiennes, notamment, ont tendance à recourir à des programmes de subventions, tandis que les États américains et les autorités locales préfèrent les obligations pour le développement de l'industrie et les dégrèvements fiscaux.

L'article de M. Bence retrace l'évolution des subventions provinciales au Canada à partir des données extraites des comptes nationaux et des comptes publics des provinces. Il en conclut que les subventions provinciales se sont accrus beaucoup plus rapidement que les dépenses fédérales, qui ont subi des coupures en raison des pressions exercées par le déficit et la croissance de la dette. Dans l'ensemble, les subventions provinciales représentent aujourd'hui près du tiers des subventions fédérales, soit environ 0,25 pour cent de la valeur des expéditions canadiennes. Il ajoute que les subventions provinciales se concentrent dans le secteur agricole, tout comme les subventions fédérales, mais qu'il est difficile de cerner l'impact des mesures provinciales destinées aux autres secteurs sur les échanges.

Dans son article, M. Fry passe en revue toute la palette des initiatives et des mesures d'encouragement prises par de plus en plus d'États pour accélérer leur développement économique et résister à la concurrence internationale. De nombreux États font appel à des politiques très variées, mais on possède relativement peu de renseignements sur l'incidence économique générale de ces multiples pratiques.

Les négociations qui se poursuivent dans le cadre de l'Uruguay Round du GATT et les négociations qui doivent s'insérer dans le chapitre 19 de l'Accord de libre-échange canado-américain pourraient avoir de profondes répercussions sur les pratiques des provinces, des États et des autorités locales. Une des questions cruciales discutées à l'Uruguay Round a plus particulièrement trait aux subventions agricoles et aux problèmes commerciaux. L'issue des négociations pourrait profondément altérer la manière d'agir des provinces et des États. On devra se pencher très vite sur la question des subventions agricoles, les négociations de l'Uruguay Round devant se terminer en décembre 1990.

Le problème du bois de construction pourrait également refaire surface dans les relations économiques entre le Canada et les États-Unis. L'ascension du dollar canadien observée depuis 1986 et l'effritement du marché de la construction domiciliaire en Amérique du Nord devraient inciter l'industrie canadienne à exercer des pressions en vue de la renégociation ou de l'abrogation du protocole d'entente ratifié la veille du Jour de l'an 1986 et en vertu duquel on perçoit une taxe de 15 pour cent sur la plus grande partie du bois de construction canadien exporté aux États-Unis.

Il est possible qu'on ait besoin de politiques variées et qu'on doive procéder à des expériences à l'échelon des provinces comme à celui des États, face à la concurrence croissante des autres pays. Toutefois, l'ambiguïté des règles internationales existantes sur le commerce, en ce qui concerne les subventions et les droits compensateurs, ne facilite pas l'identification des mesures des provinces et des États qui favorisent une saine concurrence ou qui engendrent une rivalité destructrice et sont à l'origine de frictions corrosives sur le marché. Étant donné la globalisation croissante de l'économie mondiale, les pratiques des provinces et des États devraient prendre une place de plus en plus importante dans les négociations internationales.

OVERVIEW OF PROVINCIAL AND STATE SUBSIDIES: THEIR IMPLICATIONS FOR CANADA-U.S. TRADE

Murray G. Smith[*]

Introduction

Subsidies and countervailing duties became contentious international issues during the 1980s. Although federal subsidies are more prominent, the subsidies and assistance measures of Canadian provinces and U.S. states, also became the source of bilateral differences. In part these developments were a result of changes in countervailing duty law and international arrangements regarding countervailing duties which had occurred sharing the Tokyo Round of GATT negotiations in the 1970s but which were implemented in the 1980s. As tariffs were reduced, and with technology steadily reducing the costs of transportation and communications, domestic industries have become more sensitive to real or imagined effects on their competitive position of foreign assistance to business. In addition, the sensitivities in the United States to unfair competition were heightened by the appreciation of the U.S. dollar during the mid-1980s and the large and persistent U.S. trade deficit which resulted from the strong U.S. dollar. Agricultural subsidies became a particular source of conflict which erupted into a farmtrade war. Furthermore, there is some evidence that as large budget deficits have placed pressure on federal governments in both the United States and Canada to curtail subsidies or other assistance to business, that states and provinces have become increasingly active in pursuing measures to promote their economic development.[1]

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[*] Director, International Economics Program, Institute for Research on Public Policy.

[1] See J.F. Hornbeck, *State Economic Development Programs: Their Evolution, Characteristics and Implications for Trade Agreements*, Congressional Research Service Report for Congress, December 27, 1989, R. Scott Fosler, "The State and Economic Role and Perspective," in *The New Economic Role of American States*, edited by R. Scott Fosler (New York: Oxford University Press, 1988), and Wayne Morrison *State International Trade Programs*, Congressional Research Service, February 1990. See, as well Earl Fry, "The Economic Development Policies of U.S. State and Local Governments: Implications for the Canada-U.S. Free Trade Agreement" and Jean-François Bence, "The Evolution of Provincial Subsidies in Canada" in this issue, below.

A study prepared last year examined federal nonagricultural subsidies in Canada and the United States in some detail.[2] The main conclusion was that excluding agriculture, only a few industries in both countries had, at the federal level, a subsidy rate which was large enough to have a significant effect on trade. Explicit federal subsidies in the industrial and services sectors taken together averaged in 1984 about 1 per cent in Canada and .5 per cent in the United States. Out of 83 industries, 5 in Canada and 3 in the United States had subsidy rates greater than 5 per cent, while an additional 6 industries in Canada and 10 in the United States had subsidy rates less than 5 per cent but greater than 1 per cent.

However, the study noted:

> "Before definitive conclusions can be reached, however, further work is required on the subsidy programs of provincial and state governments as well as on certain indirect subsidies e.g., stumpage or defence procurement that are often contentious between Canada and the United States. For example, if defence procurement were included as a subsidy measure, then the average U.S. non-agricultural subsidy rate would amount to roughly 2 per cent and would be greater than the equivalent average Canadian subsidy rate including defence procurement.[3]

Negotiating rules for subsidies and countervailing duties are underway in the Uruguay Round of GATT negotiations. Also, the Canada-U.S. Free Trade Agreement (FTA) mandates future bilateral negotiations on subsidies and countervailing and antidumping duties. In light of recent trends and the pressures of continuing budget deficits and mounting government debt on both federal governments, the issues of negotiating rules regarding the practices of provinces and states could be of increasing significance.

The potential significance of provincial or state measures is illustrated by the stumpage issue regarding the charges for timber harvested from leases on public forest lands. The key issue in the contentious 1986 *Softwood Lumber* countervailing duty case on lumber imported from Canada involved provincial timber leasing and stumpage practices.[4] Without inclusion of stumpage practices as a countervailable subsidy, the level of all other subsidy measures — including a number of provincial subsidy and loan guarantee programs — would have amounted to less than the de minimus level of .5 per cent as had been the case in the previous 1983 *Softwood Products* case.

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[2] Jean-François Bence and Murray Smith, "Subsidies and the Trade Laws: The Canada-U.S. Dimension." *International Economic Issues*, April-May 1989.

[3] *Ibid.*, p. ii.

[4] For a fuller discussion of the softwood lumber case, see Michael Percy and Christian Yoder, *The Softwood Lumber Dispute and Canada-U.S. Free Trade in Natural Resources* (Halifax: Institute for Research on Public Policy, 1987). See also Richard Lipsey and Murray G. Smith, *Global Imbalances and U.S. Policy Responses: A Canadian Perspective* (Washington, D.C. and Toronto: Canadian-American Committee, 1987).

This paper provides a brief sketch of the limited evidence available on subsidies by state and provincial governments, discusses some of the conceptual issues of defining subsidies under international trade rules, and explores the possible implications for provinces and states of the future agenda for negotiation of international trade rules for subsidies and countervailing duties.

Provincial and State Subsidies: Preliminary Evidence

The number and range of expenditure, taxation and regulatory measures promulgated by sub-national governments in Canada and the United States are vast. Many of these measures may be viewed as subsidies because of their impact on the economy or on particular firms and industries. For example, land use and zoning decisions by local governments may involve larger economic stakes than the spending programs of senior governments. In this paper, all we can attempt to do is sketch the broad parameters of some of the more evident subsidy measures used by provincial and state governments.

The distinction between agricultural industries and all other non-agricultural industries is important in any study seeking to measure the economic impact of subsidies utilized in Canada or the United States. Certainly, this is the case for federal subsidies as the previous study indicated, but it is also an important consideration for analysis of provincial and state measures.[5]

Agricultural Subsidies

Data compiled by the Organization for Economic Cooperation and Development (OECD) indicate clearly that both countries have extensive subsidies of key agricultural commodities — see Tables 1 and 2 for Producer Subsidy Equivalents (PSE) calculated by the OECD.[6] Also evident in Table 1 are the significant levels of subsidies to agriculture in the European Community and Japan. In light of extensive agricultural subsidies in Europe and Japan, the United States and Canada were unable to reach agreement on a bilateral basis in the Free Trade negotiations to deal with domestic agricultural subsidies or export subsidies on agricultural products shipped to third markets. Both countries agreed to continue negotiations on agricultural subsidies and trade barriers in the Uruguay Round of GATT negotiations. Although subsidies vary considerably from commodity to commodity, overall

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[5] Jean-François Bence and Murray Smith, "Subsidies and the Trade Laws: The Canada-U.S. Dimension." *International Economic Issues*, April-May 1989.

[6] Note that producer subsidy equivalents measure the cash benefit to producers of import barriers, such as quotas on dairy products imposed by Canada and the United States, the variable levies imposed by the European Community under the Common Agricultural Policy and Japan's prohibition on rice imports, as well as direct subsidies.

subsidy levels in the two countries for the main agricultural commodities are broadly comparable.

TABLE 1
PRODUCER SUBSIDY EQUIVALENTS BY COUNTRY AND COMMODITY, 1979-88
(selected years) (net percentage PSE)

	1979	1984	1986	1987 (E)	1988 (P)
CANADA					
Crops	14	25	54	45	38
Livestock products	31	40	45	47	47
All products	24	33	49	46	43
EUROPEAN COMMUNITY[7]					
Crops	41	24	67	66	40
Livestock products	45	36	46	45	48
All products	44	33	52	51	46
JAPAN					
Crops	78	81	93	94	90
Livestock products	45	48	53	55	56
All products	64	67	76	77	74
UNITED STATES					
Crops	8	21	45	42	34
Livestock products	20	34	41	40	33
All products	15	28	43	41	36

Source: Organization for Economic Cooperation and Development, *Monitoring and Outlook of Agricultural Policies, Markets and Trade* (Paris, 1989).

(E) Estimate
(P) Provisional

[7] In 1979 and 1984, all present members of the EC except Portugal and Spain.

TABLE 2
PRODUCER SUBSIDY EQUIVALENTS
SELECTED COMMODITIES
(Gross Percentage)

	CANADA		U.S.A.	
	1987 (E)	1988 (P)	1987 (E)	1988 (P)
Wheat	52	46	63	37
Coarse Grains	48	41	48	39
Soybeans/Soya	9	18	8	19
Sugar	21	25	70	57
Milk	82	74	72	59
Beef and Veal	44	46	37	35
Pork	10	14	8	8
Poultry	32	32	27	12

Source: Organization for Economic Cooperation and Development, *Monitoring and Outlook of Agricultural Policies, Markets and Trade* (Paris, 1989).

(E) Estimate
(P) Provisional

TABLE 3: UNITED STATES SUPPORT FOR WHEAT AND BARLEY DURING YEARS 1987 AND 1988, OATS FOR 1987

	Wheat		Barley		Oats
	1987	1988	1987	1988	1987
I. Level of production (MMT)	57.36	49.32	11.35	6.31	5.43
II. Producer price (III/I) ($/T)	95.84	135.52	74.77	85.20	111.62
III. Value production ($M)	5,496.83	6,684.00	933.91	982.29	605.96
IV. Direct payments (VI.A) ($M)	3,129.09	964.11	392.96	385.42	18.87
V. Adjusted producer value (III+IV) ($M)	8,625.92	7,648.11	1,386.86	1,367.71	624.83
VI. Policy transfers to producers ($M)	3,133.94	964.11	389.63	159.45	18.87
A. Direct payments (1+2+3+4+5)	3,289.62	1,704.79	336.18	170.60	26.31
1. Payments of the CCC (a+b+c)	3,289.62	1,235.81	302.69	23.00	18.80
a. Deficiency payments	0.00	468.99	0.00	125.88	0.00
b. Disaster payments	0.00	0.00	33.49	21.72	7.51
c. Diversion payments	144.75	98.97	30.58	16.15	0.53
2. CCC storage payments	102.47	171.89	26.88	45.36	12.58
3. Conservation Reserve Program	485.57	1,006.82	11.82	72.00	(21.13)
4. Acreage Reduction Program	82.67	(4.72)	7.82	(0.65)	0.59
5. Certificate premiums & discounts	2,151.52	1,357.79	568.92	164.19	25.35
B. Other support (6+7...12+13) ($M)	105.51	(10.30)	(3.05)	(7.83)	-0.16
6. CCC loan forfeiture benefits	1,432.94	594.86	474.97	51.04	0.00
7. Price enhancement	9.65	8.37	1.25	0.93	0.14
8. Advance payments benefits	1.77	223.02	2.20	48.32	0.25
9. Crop insurance					

TABLE 3: (Cont'd)

	Wheat		Barley		Oats
	1987	1988	1987	1988	1987
10. Government service programs (i+ii...+xi)	102.03	130.72	17.10	16.12	9.50
i. Federal grain inspection	0.35	1.21	0.06	0.14	0.04
ii. Research and extension	43.70	56.47	7.63	6.52	4.86
iii. Irrigation	4.43	7.02	2.37	3.67	0.24
iv. Inland waterways freight	16.20	20.51	0.70	0.70	0.63
v. Conservation	27.12	31.48	4.74	3.63	3.01
vi. Rail freight	0.79	0.61	0.13	0.08	0.01
vii. Low-interest loans for rail	1.62	2.48	0.26	0.33	0.02
viii. Cooperator export programs	1.12	1.30	0.19	0.15	0.12
ix. Marketing services	0.64	0.77	0.11	0.09	0.07
x. Plant disease and pest control	4.72	5.95	0.82	0.69	0.51
xi. Targeted export assistance	1.34	2.90	0.09	0.12	0.00
11. CCC commodity loans	309.15	186.70	42.63	23.78	0.39
12. State budget outlays	85.78	100.30	14.98	11.57	9.96
13. Farm credit programs	104.69	124.12	18.84	20.25	5.27
VII. Total government support (A+B) ($M)	5,285.46	2,321.90	958.55	323.64	44.22
VIII. Government support (VIII/V) x 100 (%)	61.23%	30.36%	70.66%	34.63	7.08%
Average for 1987 and 1988		45.80%		52.64%	8.74%

TABLE 4: FREE TRADE AGREEMENT CALCULATIONS FOR CANADA GRAINS

		Wheat		Barley	
		1988/89	1987/88	1988/89	1987/88
I.	Production (mil t)	16.00	25.99	10.21	13.96
II.	Producer price (III/I) ($/t)	181.23	120.02	106.44	58.33
III.	Value of production (mil $)	2,898.92	3,119.64	1,086.94	814.10
IV.	Direct payments (VIA) (mil $)	248.61	644.98	(38.40)	307.67
V.	Adjusted producer value (III + IV) (mil $)	3,147.54	3,764.62	1,048.54	1,121.77
VI.	Support programs				
	A. Direct payments (1+2...+*+*) (mil $)	248.61	644.98	(38.40)	307.67
	1. Payments of ASA	0.00	0.00	0.00	7.50
	2. Payments of WGSA	0.00	473.93	0.00	100.67
	3. Payments of SCG program	0.00	482.64	0.00	256.57
	4. Stabilization payments	0.79	8.24	6.52	8.06
	5. Income foregone adjustment	(305.63)	(319.82)	(120.02)	(65.13)
	*. Drought assistance	466.46	0.00	75.10	0.00
	*. 2-Price wheat	87.00	0.00		
	B. Other support (6+7...+16+17)	1,108.04	1,107.62	182.63	192.67
	6. Expenditures of CGC	1.14	(3.05)	0.21	(0.61)
	7. Wheat Board pool deficit	0.00	0.00	0.00	0.00
	8. Domestic wheat pricing	48.35	243.22		
	9. Domestic price gap (barley)			10.82	29.14
	10. Advance payments	9.54	16.58	3.71	3.73
	11. Crop insurance	416.31	45.29	36.26	7.32
	12. Western Grain Transportation Act	358.96	528.11	78.97	102.31
	13. PBLR program	33.89	63.22	5.20	8.17
	14. Research expenditures	15.65	15.61	5.70	5.48
	15. General support programs - Fed	20.92	7.44	3.77	1.48
	16. General Prov. expenditures	126.58	114.55	26.39	23.32
	17. Farm credit programs	76.70	76.64	11.60	12.32
VII.	Total government support (A+B) (mil $)	1,356.66	1,752.60	144.23	500.34
VIII.	Government support (VII/V) x 100 (%)	43.10	46.55	13.76	44.60
XI.	Two year average (%)		44.83		29.18

* new program

The Free Trade Agreement does establish, however, a link between bilateral trade barriers and domestic subsidies. The governments of Canada and the United States are obliged to calculate support levels according to a mathematical formula contained in the FTA for selected key agricultural commodities. It is only when Canadian subsidy levels are equivalent to U.S. subsidies on wheat, oats, and barley that certain Canadian import barriers are to be removed. The details of this calculation are reported in Tables 3 and 4.[8] In 1988 the support levels for the first two commodities remained lower in Canada than in the United States. Thus, under the FTA Canada can retain import licenses for wheat and oats.

It is worth noting that provincial and state programs are included in this calculation of support levels for wheat and oats under the Free Trade Agreement and are also included in the OECD data on producer subsidy equivalents in agriculture. Table 3 indicates that state budget outlays for wheat were US $ 100 million, or less than 5 per cent of total support in the United States in 1988, but state outlays for oats in 1987 were about US $ 10 million, accounting for 28 per cent of support for this commodity.

Although more extensive detailed data on state agricultural subsidies are not available, data on subsidies by provincial governments indicate that agriculture accounted for about one quarter of their total subsidies. Various countervailing duty cases taken under U.S. laws involving imports from Canada have examined provincial subsidies in some detail. But the only Canadian countervailing duty case involving imports of grain corn from the United States did not include an investigation of state subsidy practices, because the Canadian administrative authorities decided not to investigate state subsidies to U.S. corn producers. In any event, the Canadian government exercised its discretion under the public interest provision of Canadian law not to impose countervailing duties on corn in the full amount of the U.S. federal government subsidy, because of concern about the impact of the countervailing duties on food processing industries and other user interests.

Non-Agricultural Subsidies

Although agricultural subsidies presented particular difficulties in a bilateral context, it was not possible either to develop rules regarding subsidies and countervailing duties in the industrial sector in the bilateral Canada-U.S. Free Trade negotiations. Negotiations on these issues are now underway in the Uruguay Round of GATT negotiations and future negotiations are contemplated on a bilateral basis as mandated in Chapter 19 of the Canada-U.S. Free Trade Agreement.

The rationale for better measurement of subsidies in industrial sectors was articulated in a recent study prepared for the OECD. Citing concerns about international trade frictions over subsidies and the allocative costs of financing subsidies in light of the high marginal tax rates in the industrial countries, the report states:

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[8] The support calculations for grains under the Canada-U.S. Free Trade Agreement include only subsidies or financial assistance, while the OECD produces subsidy equivalents which incorporate the effects of trade barriers.

> These concerns all point to the need for increased multilateral surveillance of subsidies, both to reduce the prospects of competitive subsidisation and possible trade wars, and to promote the careful analysis of proposed subsidy programmes — even if they do not affect international trade — to assess whether they really do increase output and welfare as their proponents claim.
>
> If this process of multilateral surveillance is to be effective, both the analysis and the data on which it is based must be of high quality. A theme underlying this paper is the poor state of the data on industrial subsidies, as compared, for example, with data on tariffs or on agricultural support policies. While each government has the data needed to construct subsidy estimates that would be useful for surveillance and policy analysis, often it is not in a useful form, and there is no widespread agreement on how to calculate the relevant subsidy rates. Nevertheless, the work of the EC Commission and the EFTA Secretariat shows that data can be constructed that are reasonably consistent across both subsidy instruments and countries.[9]

The data available on state-level assistance measures in the United States are impressionistic.[10] States devote very modest resources to explicit grant programs, but utilize a wide variety of incentive and assistance arrangements including tax-free industrial development bonds, loan guarantees, tax abatements, taxable development bonds, direct loans, export financing, incubator programs for new enterprises, enterprise zones, assistance for site preparation and various regulatory measures.

Measuring provincial or state subsidies is made more complicated because one must account carefully for federal measures in each country. Confronted with the large number of state measures, Fry suggests that industrial development bonds and other 'taxable' development bonds alone may amount to an annual subsidy of about $20 billion.[11] It must be recalled, however, that the tax-free treatment of these bonds under federal income tax, which is being phased out under the 1986 U.S. federal tax reform, amounts to about $15

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[9] Robert Ford and Wim Suyker, "Industrial Subsidies in the OECD Economies", Organisation for Economic Cooperation and Development, Department of Economics and Statistics, No. 74, January 1990.

[10] For example Hornbeck and Fry cited above both report the number of states that have different types of incentive measures but do not report the levels of such subsidies either by individual state or in aggregate.

[11] See Fry, pp. ___ in this issue.

billion per year and were incorporated in the estimates of U.S. federal subsidies reported in Bence and Smith.[12]

Nonetheless, as Fry suggests since states are issuing increasing volumes of development bonds, which are exempt from state tax but not federal tax, further analysis of these state measures is warranted. Even if state development bonds are fully taxable, they permit private firms to increase their leverage of debt to equity and may offer significant interest rate advantages compared to those prevailing in the junk bond markets. The issue of valuation of the amount of subsidy for these types of measures is complex.

The issue of considering the economic effects of loan guarantees is particularly complicated in a regulated industry such as electricity generation. Do Canadian provincial utilities benefit from provincial credit guarantees to a greater or lesser extent than private utilities in the United States with the diversity of state regulatory regimes? Jenkins argues that exemption from federal income taxes and provincial credit guarantees create a capital subsidy leading to increased investment in electrical generation capacity.[13] On the other hand, Faucher and Bergeron argue that the provincial guarantee actually lowers Hydro-Québec's credit rating.[14] Averyt and Laber examine these issues in a Canada-U.S. context. They conclude that the pricing of yields on Hydro Québec bond offerings were comparable to the rates paid by U.S. utilities after taking account of differences in financial structure. Averyt and Laber also observe that cross-border comparison of tax treatment in the electricity generation and distribution industry is complicated. In Canada, the exemption of provincial electric utilities from federal corporate income tax is not unique to the industry, reflecting broader intergovernmental and constitutional arrangements regarding taxation of crown corporations. In the United States the situation is also complicated, since municipal utilities are exempt from corporate income taxes and can also issue tax-free bonds.[15]

The problem of comparing state and provincial subsidies is made more difficult, because the data do indicate that U.S. states and Canadian provinces utilize different types of assistance measures. Canadian provinces tend to utilize explicit grants, while states and local governments in the United States more frequently utilize loan guarantees, tax-free bonds and other forms of tax expenditures or abatements as incentives and assistance measures. Moreover, local governments in the United States offer various forms of assistance to business including tax abatement. Although local governments in Canada

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[12] Bence and Smith, op. cit.

[13] Glenn Jenkins, "Public utility finance and economic waste", *Canadian Journal of Economics*, 1985 (3), p. 485.

[14] Philippe Faucher and Johanne Bergeron, *Hydro Québec: La Société de l'heure de pointe* (Montréal: Les Presses de l'Université de Montréal, 1986), p. 162.

[15] William F. Averyt and Gene Laber, "Canadian Electricity Exports, Capital Costs and U.S. Trade Policy" mimeo, School of Business Administration, The University of Vermont, forthcoming in *Canadian Public Policy*, 1990.

engage in investment promotion, their capacity to offer tax abatements is circumscribed by provincial laws.

Bence (in this issue) notes that provincial subsidies — based on National Accounts data — have risen relative to Canadian federal subsidies over the last decade and now account for about one-third of total subsidies to commercial activities by Canadian governments. Thus, average provincial subsidies amount to about 0.25 per cent of the value of shipments in the Canadian economy. It must be noted that provincial subsidies are heavily concentrated in the agricultural sector. Thus, the trade impact of provincial agricultural subsidies is significant, but the impact of provincial measures in other sectors is reduced correspondingly. Outside of agriculture, provincial and state subsidies on average may have only modest effects on trade. However, bidding wars among states and provinces to attract large new investments or measures to forestall plant closings can have significant effects.[16]

The contributions by Bence and Fry do not attempt to measure the impact of provincial or state procurement practices, which may create an indirect subsidy to local production. Neither provincial nor state procurement policies were covered under the Canada-U.S. Free Trade Agreement, but these practices might be dealt with in the Uruguay Round of GATT negotiations.

Subsidies and International Trade Rules: Conceptual Issues

The issue of measuring subsidies cannot be separated from the issue of the purpose for which the measurements are to be used. The intuitive notion of a subsidy suggests some form of financial contribution by government, or as a result of government action, to private firms or industries. Such contributions normally take the form of direct or indirect grants, loans at preferred rates of finance, tax abatements, preferential procurement practices or the provision of goods or services below cost.

Not all subsidies or other assistance measures have a direct effect upon international trade. For example, a government subsidy available to all businesses intended to help workers with low skill levels and limited literacy attainment to obtain employable skills through on-the-job training will not have significant effects upon the pattern of trade or the location of production in particular industries. Broad based subsidy measures or tax abatements available across the whole economy will not normally affect the pattern of trade, because competitive advantages will be offset by adjustments in the exchange rate.[17]

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[16] E. Fry, "Economic Development Strategies" (in this issue) cites examples of incentive packages assembled to lure auto plants such as the Toyota plant in Kentucky.

[17] Harry Johnson and Mel Krauss, "Border Taxes, Border Tax Adjustments, Comparative Advantage, and the Balance of Payments," *Canadian Journal of Economics* 1970, pp. 595-602.

The issue of whether subsidies are, or ought to be, countervailable is often a matter of debate. Prior to the early 1970s, the United States and Canada shared a consensus in the GATT that countervailing duties were only to be applied in the case of explicit export subsidies, because Article XVI of the GATT — which permits export subsidies for agricultural products under certain ambiguous conditions, — prohibits export subsidies for industrial products. A countervailing duty case over Canada's automotive duty remission program in the mid-1960s was regarded as an export subsidy by U.S. authorities, but the issue was resolved on a bilateral basis by the negotiation of the Canada-U.S. Automotive Agreement (Autopact). This issue arose again on the bilateral agenda in the 1980s when Japanese automotive firms signed duty remission agreements with the Canadian government.[18] However, the remaining issues regarding export-linked duty remission for Japanese and Korean autoplants in Canada were resolved in the negotiation of the Canada-U.S. Free Trade Agreement.[19]

In the Michelin Tire case in the early 1970s, however, the U.S. Treasury Department imposed countervailing duties on tires imported from Canada because Michelin had received investment assistance from the Canadian government. This was the first instance of countervailing duties being applied to domestic subsidies not explicitly tied to export performance, although the U.S. Treasury argued that the regional development subsidies had an "export-inducing" effect because a high proportion of production from the new plant was to be exported. Although the duties were less than 2 percent, the imposition of countervailing duties on regional development programs was viewed as a disturbing precedent by Canada and other countries trading with the United States.

Subsidies and the procedures governing the application of countervailing duties were key issues in the Tokyo Round of multilateral trade negotiations.[20] The United States sought to discipline the use of subsidies by other countries while other countries sought to limit the application of U.S. countervailing duties. The European Community was unwilling to negotiate any rules that could limit subsidies under either the Common Agricultural Program or the industrial policies of member states. For its part, the United States was unwilling to implement the injury test in the application of its countervailing duty law as required under GATT Article VI.[21] Under the compromise achieved in the Tokyo Round,

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[18] See Paul Wonnacott, *U.S. and Canadian Auto Policies in Changing World Environment*, (Washington, D.C. and Toronto: Canadian-American Committee, 1987).

[19] See Paul Wonnacott "The Auto Sector" in Jeffrey J. Schott and Murray G. Smith, *The Canada-United States Free Trade Agreement: The Global Impact* (Washington, D.C. and Halifax: International Economic Issues and Institute for Research on Public Policy, 1988).

[20] For a fuller discussion see Gary Hufbauer and Joanna Shelton Erb, *Subsidies in International Trade* (Washington, D.C., Institute for International Economics, 1984).

[21] The United States claimed grandfather rights under the Protocol of Provisional Application, because the U.S. countervailing duty legislation on dutiable imports predated the GATT.

the United States introduced the injury test for countries signing the GATT Subsidies Code while the definition of countervailing subsidies was left extremely ambiguous.

The preamble to the Tokyo Round Subsidies Code enunciates some conflicting principles:

> "*recognizing* that subsidies are used by governments to promote important objectives of national policy;
>
> *recognizing* also that subsidies may have harmful effects on trade and production;
>
> *recognizing* that the emphasis of this Agreement should be on the effects of subsidies and that these effects are to be assessed in giving due account to the internal economic situation of the signatories concerned as well as to the state of international economic and monetary relations;
>
> *desiring* to insure that the use of subsidies does not adversely affect or prejudice the interests of any signatory to this Agreement, and that countervailing measures do not unjustifiably impede international trade, and that relief is made available to producers adversely affected by the use of subsidies within an agreed international framework of rights and obligations."[22]

The Tokyo Round code on subsidies and countervailing duties does not contain a definition of what is a countervailable subsidy, although the preamble does create the impression that the focus ought to be on subsidies which "have harmful effects on trade and production"[23]. It is true that Article 6, subsection 4 states:

> "It must be demonstrated that the subsidized imports are, through the effects of the subsidy, causing injury within the meaning of this Agreement." [24]

However this clause is interpreted in the context of making determinations of injury arising from subsidized imports. In Canada and the United States injury determinations are rendered by quasi-judicial tribunals, the Canadian International Trade Tribunal and the International Trade Commission respectively, while the calculations of subsidy and dumping margins are made by administrative agencies, Revenue Canada and the Department of Commerce. Thus, in practice Article 6(4) of the Tokyo Round Subsidies Code is not used to determine whether particular subsidies are indeed having a direct effect on trade, and the

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[22] Agreement Concerning the Interpretation and Application of Articles VI, XVI, and XXIII (known as the Subsidies and Countervailing Duties code), reprinted in *The Tokyo Round Agreements* (Geneva: GATT Secretariat, 1986) page 51.

[23] *Ibid.*

[24] *Ibid.*

definition of a countervailable subsidy remains ambiguous. As Robert Hudec, a noted U.S. GATT expert observes:

> "Subsidy is a coherent economic concept, but that is not the subsidy that most politicians and businesses want to countervail, for they are involved in so much subsidizing of their own that, even with a generous dose of double standards, they cannot afford to punish all the things they do themselves. As a result, the only accurate *legal* definition of subsidy in most countries is something your government does for you that my government does not do for me.[25]

Subsidy data are an indicator of the overall impact of government on the economy, but the question of whether a particular subsidy measure has an effect on trade is often subject to debate. The range of domestic subsidies which are subject to countervailing duties is narrower than the set of all domestic subsidies, but there have been pressures in the United States since the end of the Tokyo Round to broaden the definition of a countervailable subsidy, which were intensified by the appreciation of the U.S. dollar in the mid-1980s and the large U.S. trade deficit that resulted from the strong dollar.

When the United States implemented the Tokyo Round with the *Trade Agreements Act of 1979*, the definition of subsidy under the U.S. countervailing duty law was amended to include:

> (A) Any export subsidy described in Annex A to the Agreement (relating to illustrative list of export subsidies).
>
> (B) The following domestic subsidies, if provided or required by government action to a specific enterprise or industry, or group of enterprises or industries, whether publicly or privately owned, and whether paid or bestowed directly or indirectly on the manufacture, production, or export of any class or kind of merchandise:
>
> (i) The provision of capital, loans, or loan guarantees on terms inconsistent with commercial considerations.
> (ii) The provision of goods or services at preferential rates.
> (iii) The grant of funds or forgiveness of debt to cover operating losses sustained by a specific industry.
> (iv) The assumption of any costs or expenses of manufacture, production or distribution.[26]

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[25] Comments by Robert E. Hudec in Jeffrey Schott and Murray G. Smith, editors, *The Canada-United States Free Trade Agreement: The Global Impact* (Washington and Halifax: The Institute for International Economics and The Institute for Research on Public Policy, 1988), pp. 89-90.

[26] § 1677(5) Consolidated Statutes of the United States.

Thus, the issue of which domestic subsidies are subject to countervailing duties turns on the statutory interpretation of "domestic subsidies... to a specific enterprise or industry, or group of enterprises or industries".[27]

Two bills introduced into the Ninety-ninth Congress sought to redefine subsidies for resource products.[28] Both bills were intended to overturn the U.S. International Trade Administration's *Softwood Products* decision of 1983, which found Canadian stumpage policies not to be countervailable subsidies under U.S. law. The bill sponsored by Congressman Bonker was aimed specifically at Canada's stumpage practices and would have ensured that Canadian forest products were subject to countervailing duties by comparing average Canadian and U.S. stumpage rates. The Gibbons proposal was to declare "resource removal rights" to be a subsidy if the rates were at less than "fair market-value". This latter provision was incorporated in H.R.4800, the Omnibus Trade Act passed by the House of Representatives in the Ninety-ninth Congress.

Neither the Bonker nor the Gibbons bill found its way into law, however. Nevertheless, the result desired by some U.S. lumber interests was achieved in October 1986 when the International Trade Administration of the Department of Commerce reversed its previous ruling, citing the *Cabot Corp v. United States* decision in the Court of International Trade and, in a preliminary determination, found that the stumpage practices of provincial governments were countervailable subsidies. This administrative and judicial redefinition of subsidy serves to underline the ambiguity of the statutory criteria for imposing countervailing duties.

Both the House and Senate versions of the draft 1988 trade bill included the following special rule to guide the interpretation of U.S. countervailing duty law:

> (B) Special Rule. — In applying sub-paragraph (A), the administering authority, in each investigation, shall determine whether the bounty, grant, or subsidy in law or in fact is provided to a specific enterprise or industry, or group of enterprises or industries. Nominal general availability, under the terms of the law, regulation, program, or rule establishing a bounty, grant, or subsidy, or the benefits thereunder is not a basis for determining that the bounty, grant, or subsidy is not, or has

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[27] For a fuller discussion of domestic subsidies subject to U.S. countervailing duty laws, see Gary Horlick, Judith Bello and Michael Levine "The Countervailability of Subsidies: Specificity" in *U.S. Import Relief Laws: Current Developments in Law and Policy* (New York: Practising Law Institute, 1985).

[28] H.R.1648, Wood Products Trade Act of 1985, sponsored by Congressman Bonker, and H.R.2451 sponsored by Congressman Gibbons, which would "amend title VII of the Tariff Act of 1930 in order to apply countervailing duties with respect to resource input subsidies."

> not been, in fact provided to a specific enterprise or industry, or group thereof.[29]

This general statutory language was intended to guide the interpretation of the concept of specificity in U.S. countervailing duty law. The House bill also contained a section determining the calculation of subsidies where goods or services are provided on a preferential basis. The report of the House Ways and Means Committee offered the following explanation for this new special rule:

> With regard to the so-called specificity test, sub-paragraph (B) would require the administering authority to determine whether benefits *actually conferred* accrued to a specific enterprise or a group of enterprises or industries rather than merely examining the legal nature of the subsidy program and the "nominal" availability of such benefits. This, in effect, codifies the finding of the Court of International Trade decided in *Cabot Corp. v. United States*, that the Commerce Department had been interpreting the concept of "specificity" and "general availability" in an unduly narrow manner.[30]

Expanding on this issue of interpreting "specificity" or "general availability", the Ways and Means Committee report states:

> The Court in *Cabot* provided a sound interpretive rule to be applied in those cases where broadly available benefits are at issue. The test for such programs is whether there is a sufficient degree of competitive advantage in international commerce being bestowed upon a discrete class of beneficiaries that would not exist but for government action. This necessarily involves subjective, case-by-case decisions to determine whether there is such a discrete class of beneficiaries.[31]

The Ways and Means Committee offered the following reason for the new statutory provision on specificity:

> The Committee is encouraged by the Commerce Department's recent preliminary affirmative determination in *Certain Softwood Lumber Products from Canada* as a reflection that the Department is beginning to take a broader perspective on its interpretation of the specificity test in dealing with resource-type products in light of the court's holding in *Cabot*. It now appears that a

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[29] Section 333(B) of H.R.3 as passed by the House of Representatives (received in the Senate April 21, 1987) and Section 333(B) of H.R.3 as passed by the Senate July 21, 1987.

[30] U.S. Congress, *Trade and International Economic Policy Reform Act of 1987*, Report of the Committee on Ways and Means (Washington, D.C.: U.S. Government Printing Office, 1987), p. 123.

[31] *Ibid.*, p. 124.

> special provision dealing with resource input products is not necessary for such an input product to be countervailable if the Department properly applies the specificity test.[32]

In the end, the House version of the special rule for applying the specificity criteria was deleted from the omnibus trade bill, before it was passed into legislation as the *Omnibus Trade and Competitiveness Act of 1988*. Trade lawyers suggest that recent decisions in the Court of International Trade have clarified the *Cabot* decision and narrowed the criteria for specificity.[33] Furthermore, if a softwood lumber case were to occur today, the determinations of subsidy and injury would be subject to review by the binational review mechanism under Chapter 19 of the Canada-U.S. Free Trade Agreement.

The issues raised by the changes in U.S. countervailing duty law proposed in the various versions of the trade bill and possible interpretations of the *Cabot* decision go beyond resource industries to regard any government regulation that involves an element of discretionary administration, or results in disproportionate benefit to a group of firms or industries, as creating the basis for a countervailable subsidy. If any discretion in the administration of such government regulations as anti-trust laws or environmental standards becomes grounds for a countervailable subsidy, this vastly expands the scope of what is considered to be a subsidy. For example, the treatment of chemical companies under environmental protection laws could be regarded as countervailable, as could the output of any firm receiving government assistance for research and innovation or local government assistance with land development. Should stricter federal controls on air pollution in heavily populated areas be regarded as a regional development subsidy to areas with less stringent controls, or as a subsidy to the smelting industry if the smelting industry is located in less populations areas? Similarly, high technology industries that secure government contracts on the basis of decisions involving discretion rather than the blind application of rigid rules could be subject to scrutiny on a "subjective case-by-case" basis, to use the language of the Ways and Means Committee.

The concept of "de facto" versus "de jure" specificity involves a very ambiguous and subjective standard. Earlier it was suggested that subsidies for special on-the-job training for workers with literacy problems should not be regarded as countervailable. Suppose, however, that inner-city automotive plants in the United States receive a disproportionate share of federal assistance for training; that the airline and steel industries benefit disproportionately from federal pension guarantees; or, that a new Japanese automotive plant in rural Tennessee or southwestern Ontario receives a disproportionate share of a state or provincial subsidy for training. There might be more grounds for suspicion that provinces or states are more likely to bias the administrative criteria of such subsidy programs, in order to promote particular industries. Yet the concentration of particular industries or labour force characteristics within a province or state, could easily lead to a "de facto" concentration of benefits, although there was no intention by policy-makers to achieve this

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[32] *Ibid.*, p. 126.

[33] See Gary Horlick, Geoffrey Oliver and Debra Steger "Dispute Resolution Mechanisms" in Jeffrey Schott and Murray Smith (eds.) *The Global Impact*, p. 80.

result. Depending on where the line is drawn on "specificity", only a few, or many, provincial and state measures would be countervailable subsidies.

The specificity issue has become contentious under U.S. (and also Canadian) trade law, because it is the only factor that determines which domestic subsidies are subject to countervailing duties and which are not subject to countervailing duties. Clearly, a subsidy available to all sectors of the economy, such as social security or medical insurance should not be countervailable following the border tax adjustment argument that effects on competitiveness are offset by the exchange rate.[34] However, where does one draw the line as subsidies are directed to portions of the economy. Should special tax incentives for the manufacturing sector, such as accelerated depreciation or tax credits for research and development be countervailable? Should agriculture extension services be subject to countervailing duties? Under current U.S. countervailing duty practice, subsidy programs or tax incentives available to all of the manufacturing or agricultural sectors are not regarded as specific. Yet the whole agricultural sector accounts for less than two per cent of U.S. GNP and about six per cent of U.S. exports of goods and services. In the 1986 *Softwood Lumber* case provincial stumpage practices were found to be countervailable because the alleged benefits were limited to the forest products industries. Yet forest products account for about 15 per cent of Canadian exports of goods and services. If direct financial contributions to the whole agricultural sector are not subject to countervailing duties because they are not viewed as specific, but the alleged indirect subsidy of timber leases and stumpage mechanisms is viewed as a specific, and hence countervailable subsidy, it is indicative of how convoluted the concept of specificity has become in the interpretation of U.S. countervailing duty law.

What is required is a clearer set of international rules about which subsidies "have harmful effects on trade". Although specificity is a useful criteria for determining whether subsidies affect trade, other criteria are also useful. For example, subsidies to the primary fishing industry which are clearly specific to an industry may maintain employment in particular communities, but have little or no affect on trade because the harvest is controlled by quotas.

Similarly, difference in of timber leasing and stumpage assessment policies in various Canadian provinces and on federal, state and private lands in the United States may not have a significant affect upon trade. As the United States Federal Trade Commission (FTC) argued in its brief to the Department of Commerce in the 1983 *Softwood Products* case:

> only those payments that distort trade and resource allocation by affecting the price or quantity of the good produced should be subject to countervailing duties. The FTC then provided a detailed economic analysis which showed that the benefit, if any, realised by timber owners in Canada from the stumpage fee did

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[34] See Johnson and Krauss, 1970 cited above in note 11. For a discussion of specific examples see Richard Lipsey and Murray Smith, "An Overview of Harmonization Issues" in Richard Lipsey and Murray Smith (eds.) *Policy Harmonization: The Effects of a Canadian-American Free Trade Area* (Toronto: C.D. How Institute, 1986).

> not affect the quantity or price of Canadian lumber sold in the U.S., and so was not a countervailable duty subsidy to lumber.[35]

As with fishing, the harvesting of timber from public forest lands in Canada is restricted by quotas to ensure sustained yield forest management.

Moreover, economic efficiency criteria which were the basis of the FTC brief require that timber should be harvested until the cost of harvesting and transporting the logs to the processing facility equals the net value of that species of timber and quality of log. Thus, as long as there is no explicit financial subsidy to harvesting and transport costs, a private firm will not harvest uneconomic timber. The stumpage fees are an attempt to collect the economic rent on higher quality, high volume and more accessible timber lands. Economists argue that failure to collect all of the economic rents will not distort timber harvesting decisions and economic activity, but that overcharging for stumpage fees will curtail the harvesting of economic timber supplies.

On the other hand, assistance to processing or manufacturing industries may transfer production and employment across international boundaries. Thus, financial subsidies, tax incentives or loan guarantees to assist the construction of fish plants or pulp mills will influence trade and production. The alleged pass-through of either direct subsidies or less-than full capture of resource rents on primary products depends on the presence of either, or both, of export controls and import barriers.

The concept of decoupling in the agricultural negotiations in the Uruguay Round is attempting to deal with the same basic issue of determining whether or not particular subsidies have a trade impact.[36] Since the overall amount of agricultural subsidies is very substantial, it is important to determine which programs, such as price-supports, are the most trade distorting.

The Negotiating Agenda

Developing mutually agreed rules about which subsidies have "harmful effects on trade" will not be easy in either the ongoing Uruguay Round of GATT negotiations or in prospective

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[35] Carol Crawford, "Trade Policy and the Consumer: The Consumer Advocacy Role of the Federal Trade Commission in Trade Law Proceedings" in *International Trade and the Consumer*, (Paris: Organization for Economic Cooperation and Development, p. 266, 1986).

[36] See William Miner and Dale Hathaway, "World Agriculture in Crisis: Reforming Government Policies", pp. 35-110, B. Carr et. al., "A North American Perspective on Decoupling", pp. 113-139, John Marsh, "An EC Perspective on Decoupling", pp. 141-158 and Wilhelm Henrichsmayer, "A Commentary", pp. 159-166 in William Miner and Dale Hathaway (eds.) *World Agricultural Trade: Building a Consensus* (Washington, D.D. and Halifax: Institute for International Economics and Institute for Research on Public Policy.

bilateral negotiations mandated under the FTA. Clearly, such rules could raise significant issues for the policies and practices of subnational governments in Canada and the United States.

The most obvious subsidy issues involving Canadian provinces and U.S. states arise in the agricultural sector. The immediate challenge for both countries is the need to negotiate agreements and disciplines on agricultural subsidies and quantitative import restrictions in the multilateral GATT negotiations. Both countries are pushing for major reforms in farm and trade policies in the Uruguay Round of GATT scheduled to conclude this year. Achieving an agricultural trade agreement will require a willingness to reduce or remove subsidies and border measures that limit or distort trade. The European Community must agree to discipline its system of variable import levies and export subsidies and to lower internal farm supports. All European countries and Japan must open up their systems to allow more agricultural trade. And all of these countries must agree to stronger trade rules for agriculture that apply equally and can be enforced. These must include disciplines on the use of domestic subsidies that affect farm trade. The full implementation of the Canada-U.S. FTA for agriculture must await the outcome of the Uruguay Round. Should this key multilateral negotiation fail, the two governments face a challenge to tackle these problems between themselves. Even if the Uruguay Round achieves much in developing clearer international trade rules and in reducing agricultural subsidies, there is likely to be unfinished business between Canada and the United States with respect to farm subsidies.

Interesting issues are raised for provinces and states by proposals that have been made in the Uruguay Round of GATT negotiations. For example, the European Community has pointed out an anomaly in existing rules regarding specificity. If a state or province offers development assistance program across its whole jurisdiction the program would not be countervailable, but if the federal government were to provide the same program to a group of states or provinces the program would be actionable under countervailing duty laws. If state or provincial programs are countervailable simply because not all states or provinces offer an identical program, then many existing state and provincial programs potentially would be subject to countervailing duties.

The United States has proposed in the GATT that resource rights that are auctioned should not be treated as an actionable or countervailable subsidy. This is the stumpage issue cast in more general terms. If this provision is regarded as a sufficient, but not necessary condition for the allocation of resource rights to become non-actionable, it would be a useful clarification of the present ambiguity about whether resource rights should be subject to countervailing duties. However, if this auctioning criteria is viewed as a necessary condition for resource rights to be non-actionable, it raises interesting questions for the allocation of hard rock mining rights in both countries, because the tradition of the prospector staking a claim is the method of allocating these rights. Similarly fishing quotas are allocated without auctioning in either country.

The issue of whether allocation of resource rights confers a subsidy is linked to the broader issues of resource and environmental management. For example, agricultural producers may utilize water for irrigation, which is subsidized directly by government payments for capital and operating costs and also indirectly because the charges for use of

the water do not take account of the "fair market value" of the water rights. Considering only the direct subsidy Sutton calculates that "16 per cent of U.S. Upland cotton production and 12 per cent of rice production" received irrigation water and paid fees that failed to recover direct operating and capital costs.[37]

The issue of an indirect implicit subsidy from allocation of resource rights is a much more general problem. Many industries utilize large volumes of water without paying the scarcity value of the water rights. Similarly pollution rights, such as the right to emit acid-rain precursors or waste water are not normally auctioned. Thus, the allocation of "rights" to pollute could come to be regarded as a subsidy issue.

The definition of subsidies for the purpose of international trade rules is also linked to other trade barriers. For example, if the procurement practices by provinces and states were liberalized significantly through the Uruguay Round of GATT negotiations then there would be no need to attempt to measure the subsidy stemming from preferential procurement. Similarly, if there are no barriers to imports or exports of primary resource products, then there is no pass through of any alleged subsidy of the resource product to the processing industry. Furthermore, if there are quota restrictions on the harvest of timber or fish and no direct subsidy of harvesting costs, then the failure to capture resource rents will have no effect on trade. Yet agricultural and industrial sectors which utilize "unpriced" environmental resources may alter production and trade patterns significantly depending on the characteristics of environmental regulatory regimes imposed by provincial and state governments.

Provincial and state governments also fund higher education and engage in various measures to support research and development. Should provincial or state efforts to support medical research or the development of biotechnology be regarded as a countervailable subsidy simply because it is targeted to a particular field of research endeavour? It seems sensible to exclude from countervailing duty actions support for research which is not proprietary and is published in scientific journals, because there is no strong linkage between the location of research and the ultimate location of production benefitting from the technological innovation. In practice, however, it may be difficult to determine the allocation of government support for research which meets this "public goods" criteria as contrasted with that which is commercialized.[38]

Since provincial or state subsidies are relatively modest, consideration of a net subsidy approach where countervailing duties are applied only on the subsidy differential could raise some issues. The net differential subsidy approach would reduce the risk of inappropriate countervailing duty actions, but could lead to bidding wars among competing jurisdictions. One way to resolve this dilemma would be to apply the net subsidy approach only if

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[37] John D. Sutton "Resource Policy Subsidies and the GATT Negotiations", Economic Research Service, United States Department of Agriculture, August, 1989.

[38] In many ways the question of allocation of public support for research is analogous to determining the amount of forest service expenses which should be allocated to recreational uses such as compared with commercial forestry.

countries (including sub-national jurisdictions) remain in compliance with multilateral subsidy undertakings.[39] The significance is most evident in the case of agriculture -- see tables 1 and 2 noted previously.

Perhaps the most interesting question is, whether provinces and states are prepared to participate in international commitments to limit bidding wars in attracting new investment. Similarly, will provinces and states be prepared to accept restraints on subsidies or other measures intended to forestall plant closings?

Conclusion

The measurement of subsidies is complicated by both the number of programs and measures taken by provincial, state, and local governments and the ambiguity of what is a subsidy under international trade rules. On average state and provincial subsidies may have only modest effects on production and trade, but incentive packages assembled to attract new investment or to defer plant closings can have significant effects on production and trade. With growing globalization, the practices of states and provinces are likely to remain, and indeed become more prominent, on the international negotiating agenda.

The most immediate item on the international negotiating agenda with significant implications for provinces and states is the negotiations on agricultural subsidies in the Uruguay Round. Although there are serious disagreements among the United States, the Cairns Group (of which Canada is a member), the European Community and Japan about specific aspects of the agricultural negotiations, there is general agreement that governments should make commitments limiting domestic subsidies. At a minimum, under such arrangements, the federal governments of Canada and the United States will be obliged to take account of provincial and state agricultural subsidies in meeting national commitments. Moreover, specific obligations regarding the practices of provinces and states may well be required.

Another issue which could reemerge on the bilateral agenda at any time is the export taxes and stumpage fee increases levied by federal and provincial governments in Canada in order to obtain a negotiated settlement to the 1986 Softwood lumber dispute. The appreciation of the Canadian dollar since 1986 combined with a slowdown in housing construction in North America could lead to pressures by the Canadian industry to terminate or to renegotiate the softwood lumber arrangement.

The ambiguity of the international trade rules for subsidies and countervailing duties creates difficulties for provincial and state governments. Innovation by, and competition among, provincial and state governments in offering a wide range of amenities and in fostering a skilled labour force with the least tax burden is an essential element in responding to global competition. Yet the existing international trade rules do not provide

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[39] Murray G. Smith "Negotiating Import-Relief Laws" in Murray Smith (ed.) *Canada, the Pacific and Global Trade*, (Halifax: Institute for Research on Public Policy, 1989), p. 155.

much guidance to policymakers in determining when provincial and state measures are healthy competition and when they may result in destructive rivalry and lead to debilitating trade frictions.

ANALYSIS OF PROVINCIAL TRANSFER PAYMENTS TO BUSINESS IN CANADA

Jean-François Bence[*]

Introduction

The purpose of this paper is to contribute to a better understanding of provincial subsidies in Canada. The first section provides a descriptive and statistical profile of the evolution of provincial subsidies in Canada over the last decade. In the second section the distribution of provincial subsidies by provinces is analyzed, and the final section presents, for some selective industries, a general assessment of the impact of provincial subsidies on trade flows.

In general, governments support domestic industries through a wide range of microeconomic policies and industry-specific programs. In Canada, provincial governments provide assistance to business through the following types of programs:

Grants:	Programs which provide direct monetary assistance to a business to enhance its economic viability.
Direct Loans:	Programs under which provincial governments lend money directly to a business, possibly at concessionary rates.
Loan Guarantees:	Provincial governments guarantee loans to a business that are provided through private sector channels.
Tax Expenditure:	Governments provide financial assistance to a business through a tax benefit, deduction, or credit rather than a direct cash payment.
Government Insurance:	Programs under which governments insure a business against certain types of losses. In some instances governments collect premiums as a private insurance company would, while other programs entail no premiums. The latter are funded through government revenues and fees.
Below-Cost or Free-of-Charge Service:	Programs which provide services, commodities, or production inputs to a business at less than their fair market value.

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Government Purchases or Price Guarantees:	Governments support or assist a business through direct purchases or price guarantee arrangements; governments are a purchaser of last resort or guarantee a specified price through deficiency payments.
Price Regulation and Cartel:	Programs that benefit an industry by enforcing a restrictive marketing arrangement, or that regulate the price of commodities.

Among the various types of assistance, grants are not only the most straightforward to evaluate but also, in Canada, the more commonly used, either by the federal government or provincial authorities. In contrast, in the United States, direct cash payments are less important than tax abatement and credit programs as a means of assistance to business by state levels of government.[1]

One of the major obstacles in studying the evolution of subsidy programs in Canada is data availability. First, data on programs such as government insurance, below-cost or free-of-charge services, government purchases or price guarantees are very scarce. Second, data on tax expenditures, loans and loan guarantees are not available on a comprehensive basis for both levels of government. As a matter of fact, amounts of loans and loan guarantees can be obtained, but there is only limited information to assess the outlay equivalent of the subsidy flow from loans and loan guarantees.[2]

Consequently, grant programs are not only the more commonly used but also the only ones for which some comprehensive information is available. These data are provided on an annual basis by the National Accounts, both for federal and provincial governments. National Accounts data distinguish between subsidies and capital assistance. Subsidies are

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[1] For a description of U.S. State governments' economic development programs, see the article by Earl Fry (in this issue) and J.F. Hornbeck, State Economic Development Programs: Their Evolution, Characteristics and Implications for Trade Agreements, Congressional Research Service, Report for Congress, December 1989.

[2] A simple but not fully satisfactory manner of assessing the implicit subsidy of loans and loan guarantees is to take into account payment of interest, payment of liabilities or loan losses from defaulted loans or loan guarantees. This kind of information is available as it represents a cash payment similar to grants.

defined as all grants to business for current production costs.[3] Provincial subsidies are paid to agriculture in the form of freight assistance on limestone for fertilizer and other products, and various types of production subsidies. Provincial subsidies to business include assistance in the payment of property taxes by homeowners. Capital assistance involves grants to industry to encourage new construction or for plant expansion and improvement.

Recent Evolution of Provincial Subsidies

In order to examine the evolution of provincial subsidies over the last decade, we will utilize National Accounts data. There are some difficulties with these data. First, as noted, housing subsidies are included. Second, all federal-provincial cost shared programs are treated as provincial programs for National Accounts purposes. Third, data currently published for 1986 and 1987 are still provisional and subject to revisions.

Overview

Provincial government transfer payments to business increased from $849 million in 1976, to $4176 million in 1987 (see Table 1).[4] This represents a dramatic increase of 392 per cent, in nominal dollars, over a ten year period. During the same period, federal government transfer payments increased by 177 per cent (Table 2).

In real terms, adjusted for inflation, provincial government transfer payments increased by 151 per cent and federal transfer payments by 41 per cent, while GDP (gross domestic product) at constant prices increased by 42 per cent. Combining the two levels of government, total government transfer payments increased by 67 per cent in real terms from 1976 to 1987. These figures show that federal transfer payments expanded at the same rate as the Canadian economy, whereas provincial government support increased much faster than GDP. Therefore, it appears that provincial governments are playing an increasing role in supporting business, even though the federal government is still the main supplier of direct assistance to business.

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[3] The National Accounts define the business sector as all transactors who produce goods and services at a price which is intended to cover the cost of production, including corporations, unincorporated business enterprises, independent professional practitioners and government business enterprises. Persons who own residential dwellings are assumed to be operating as business enterprises (landlords) with respect to their housing activity whether or not they occupy their own premises. Similarly, private non-commercial institutions are assumed to be operating as business enterprises when they undertake capital outlays, although their current transactions are included in the personal sector.

[4] In this report, provincial government transfer payments to business include both subsidies and capital assistance but exclude transfers for housing.

TABLE 1

PROVINCIAL GOVERNMENT TRANSFER PAYMENTS TO BUSINESS
(calendar year/millions of dollars)

	1976	1981	1985	1987
Subsidies:	666	1757	3675	3614
Capital Assistance:	183	276	730	562
Total:	849	2033	4405	4176

Note: Provincial government transfers for housing excluded (on a fiscal year basis: 1978, 1982, 1986 and 1988).

Source: National Accounts, Statistics Canada.

TABLE 2

FEDERAL GOVERNMENT TRANSFER PAYMENTS TO BUSINESS

(calendar year/millions of dollars)

	1976	1981	1985	1987
Subsidies:	2445	6476	5585	6032
Capital Assistance:	405	747	2856	1865
Total:	2850	7223	8441	7897

Note: Federal government transfers for housing excluded (on a calendar year basis: 1977, 1981, 1985, 1987).

Source: National Accounts, Statistics Canada.

However, from 1985 to 1987 provincial transfer payments registered a 5 per cent decrease. At the same time, federal transfer payments declined by 6 per cent. With inflation running at 4.5 per cent per annum, this represents a real decrease in subsidies by about 15 per cent. In recent years, the budget deficit has become a major issue in Canada and in order to cope with this problem, public spending has been reduced in several sectors and some public enterprises have been privatized. One of the most dramatic changes was the discontinuation of major federal subsidy programs, such as those directed to the oil industry. Provincial governments also had to cope with budget deficits and debt problems. However, their cuts in public spending have been less than at the federal level.

Overall, provincial governments play a growing role in supporting the business sector in Canada. For the last ten years, their contributions expanded much faster than at the federal level and faster than GDP. Provincial payments represented 23 per cent of total transfer payments to business in 1976 and 22 per cent in 1981 (Table 3). In 1985 and 1987, their shares were respectively 34 per cent and 35 per cent.

This phenomenon could make multilateral and bilateral negotiations on subsidies and countervailing duties even more intricate and difficult than in the past. Provincial governments may be reluctant to decrease their support to business not only for social and economic reasons, but also because they compete among themselves in trying to attract or to retain investments in their own provinces. Moreover, associating provinces with international commitments in this matter could prove to be complex, raising constitutional issues.

Subsidies and capital assistance

Transfer payments can be split into subsidies and capital assistance. The former reduce production costs in the period when they are given, while the latter provide a flow of subsidies over time by reducing the cost of acquiring capital goods. It is worth noting that current subsidies are more important than capital assistance and that their share in provincial transfer payments to business is growing over the years. In 1976, subsidies accounted for 78 per cent of provincial transfer payments, while their share in 1987 was 86 per cent. As a matter of fact, provincial subsidies registered a dramatic increase of 443 per cent from 1976 to 1987. At the same time, capital assistance only rose by 207 per cent in nominal terms.

The respective shares of federal and provincial governments in subsidies and capital assistance (Table 3) confirm the growing importance of subsidies in provincial support to business. Provincial subsidies, which accounted for 21 per cent of total subsidies in 1976, increased to 38 per cent in 1987 while the provincial capital assistance share of total capital assistance declined from 31 per cent to 23 per cent.

TABLE 3

SHARES OF PROVINCIAL AND FEDERAL GOVERNMENTS IN SUPPORT OF BUSINESS
(percentages)

	1976	1981	1985	1987
Subsidies:				
Provincial	21	21	40	38
Federal	79	79	60	62
Capital Assistance:				
Provincial	31	27	20	23
Federal	69	73	80	77
Total:				
Provincial	23	22	34	35
Federal	77	78	66	65

Source: National Accounts, Statistics Canada.

We have already pointed out that the rising importance of provincial transfer payments could complicate international negotiations on subsidies and countervailing duties. It can also be seen as a counterweight to the relative withdrawal of the federal government from certain types of industrial assistance programs.

Analysis by Province

To analyze the distribution of provincial subsidies by provinces, we will mainly use an IRPP inventory of provincial grants support programs in 1987-88 developed from the public accounts of the provinces.[5] The definition of provincial subsidies used in this inventory is slightly different from that of the National Accounts. In this inventory, support programs (grants and also implicit subsidy value of loans and loan guarantees and tax expenditure, when the information is available) provided to commercial enterprises are included. Commercial enterprises are usually defined as profit-motivated, private sector businesses.

[5] Jean-François Bence and Greg Klump, Inventory of Provincial Support Programs to Business, Working Paper, (Halifax: The Institute for Research on Public Policy, April 1990). Summary tables of this inventory are in the annex.

For purpose of the inventory, a wider definition is used, reflecting the structure of the Canadian economy and the various roles that governments play in the economy. In addition to private-sector incorporated and unincorporated businesses, commercial enterprises are defined to include the following: farmers and fishermen; agricultural, fishing, forestry and dairy cooperatives; and certain government-owned enterprises (those enterprises which operate largely in a business-oriented manner or are the major producers in a given industry).

The estimated figure of provincial support is $2.74 billion for 1987-88 while the amount of provincial government transfer payments, as provided by the National Accounts for the same fiscal year, is $4.68 billion.[6] This large difference can be explained mainly by the inclusion of provincial housing grants in the National Accounts figures and their exclusion from the Institute's Inventory of Provincial Support Programs to Business. (In 1987-88, provincial housing grants were $1.18 billion.) Another factor which may explain part of the discrepancy between the two figures is that the IRPP estimates only include grants paid directly to commercial enterprises. On the contrary, the National Accounts figures may include some grants paid to non-commercial enterprises under various industrial assistance programs.[7] Moreover, federal grants paid to commercial enterprises through provincial programs are usually reported under provincial grants in the National Accounts, whereas these amounts are considered as federal grants in the IRPP analysis. Programs involved are Crop Insurance ($270 million in 1987-88) and a number of minor federal agricultural grants programs. Finally, we have deliberately excluded from the IRPP study grants paid by departments of health (mainly in Quebec and Alberta),[8] income tax rebates to utility companies in Alberta,[9] and a one-time grant in Newfoundland.[10]

On the other hand, some amounts are excluded from the National Accounts' figures but included in IRPP estimates. Whenever available on a comparable basis, IRPP estimates include data on loans and loan guarantees and on tax expenditures, while National Accounts do not always include such data. The implicit subsidy value of loans and loan guarantees is not provided by an assessment of the outlay equivalent of the subsidy flow, but by the

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[6] These figures do not include transfer payments from the Yukon and Northwest Territories governments.

[7] For example, if a non-profit theatre group receives a subsidy this is treated as a transfer to individuals, but if funding is provided to a non-profit group to build a theatre that is considered as capital assistance.

[8] Québec, ministère de la santé et des services sociaux: $88.13 million; Alberta, Department of Health, Hospitals and Medical care: $53.29 million. In some provinces subsidies are paid to private companies providing services such as rural ambulances and nursing homes, while these services are provided by public agencies in other provinces.

[9] Utility companies income tax rebates fund: $325.19 million.

[10] Writedown investment: $17.45 million.

amount of interest payment, payment of liabilities or loan losses from defaulted loans and loan guarantees.

When looking at the estimates of provincial transfer payments to business (Table 4), there are clearly some major differences between the provinces. In fact, one can distinguish three categories of provinces with regards to transfer payments to business. In three of them (Quebec, Ontario and Alberta), the amounts of subsidies and capital assistance to commercial enterprises are much higher than in the others. With transfer payments in a range of $630 million to $730 million, these three provinces together provide more than 70 per cent of all provincial transfer payments. In a second category, including British Columbia, Manitoba and Saskatchewan, provincial transfer payments amount to about $150 million in each of these provinces. In the four remaining provinces, all located in Atlantic Canada, subsidies and capital assistance amount to less than $100 million, with the exception of Nova Scotia.

The comparison of the distribution of transfer payments and of GDP (Table 5) complements the previous analysis. On a regional basis, it is quite clear that provinces in Atlantic Canada provide proportionally more support than those in Central Canada. This reflects the low level of development of the Atlantic provinces and the primary importance of resource-based activities, which are generally heavily subsidized. To a lesser extent, the same imbalance occurs in Western Canada. As a matter of fact, this is mainly the case for Alberta and on a much lower scale for Manitoba and Saskatchewan. As these provinces are agriculture-oriented, this suggests that a prominent share of transfer payments must consist of subsidies related to agriculture. One should also note the large imbalance between the respective shares of transfer payments and of GDP in Ontario and British Columbia, and consequently the relatively low subsidy rate in these provinces. As Ontario is by far the leading provincial exporter to the United States, this may have particular implications for bilateral negotiations on subsidies and countervailing duties.

Impact on Trade

The objective of this section is, on the basis of the limited information available, to assess the impact of provincial transfer payments on trade. It should be mentioned that the impact of subsidies on trade flows is not always clear. For instance, some programs may not have any impact on overall production costs and may simply offset the higher costs involved in shifting from a preferred location. Furthermore, subsidies may increase the number of firms in one industry, which can, in certain circumstances, raise overall production costs. Finally, subsidies or tax incentives available to many industries will tend to be offset by exchange rate adjustments. But a more basic difficulty in assessing the impact of provincial subsidies on trade comes from the lack of information on the amounts involved and on the distribution of funds among the industries.

TABLE 4

ESTIMATES OF PROVINCIAL TRANSFER PAYMENTS TO BUSINESS 1987-88

Province	Amounts ($ million)
Newfoundland	91.87
Prince Edward Island	22.38
Nova Scotia	105.56
New Brunswick	67.51
Quebec	732.86
Ontario	628.76
Manitoba	144.67
Saskatchewan	138.58
Alberta	637.74
British Columbia	173.92
Total	**2,743.85**

Source: Provincial public accounts, 1987-88.

TABLE 5

PROVINCIAL DISTRIBUTION OF TRANSFER PAYMENTS TO BUSINESS AND OF GROSS DOMESTIC PRODUCT AT MARKET PRICES (percentages)

	GDP (1987)	Transfer Payments (1987-88)
Newfoundland	1.3	3.3
Prince Edward Island	0.3	0.8
Nova Scotia	2.4	3.8
New Brunswick	1.9	2.5
Atlantic Canada	**5.9**	**10.4**
Quebec	24.1	26.7
Ontario	41.1	22.9
Central Canada	**65.2**	**49.6**
Manitoba	3.7	5.3
Saskatchewan	3.2	5.1
Alberta	10.7	23.2
British Columbia	11.3	6.4
Western Canada	**28.9**	**40.0**

Sources: GDP: National Accounts, Statistics Canada. Transfer Payments: estimates based on provincial public accounts.

It is impossible to give any precise indication of the level of subsidy, as estimates can be misleading and easily challenged. However, on the basis of our inventory of provincial transfer payments to commercial enterprises, provincial support as a percentage of GDP was estimated at 0.5 per cent in 1987-88.[11] If, in order to reflect more accurately the effect of subsidies on production costs, we use Canadian production (gross output) as a basis of comparison, the provincial rate of subsidy can be estimated at 0.25 per cent.[12]

A detailed review of the impact of subsidies on trade flows is beyond the scope of this article. Provincial public accounts do not provide detailed information on which to base a distribution among industries.[13] But, with the limited information available, we have been able partially to allocate provincial transfer payments to six major sectors: agriculture, fishery, forestry, energy, transportation, and cultural industries.

As the universe of government programs is constantly changing with the creation of new programs, the elimination of others and the alteration of funding levels, the following figures should be regarded as a snapshot of provincial programs available to some sectors of the economy in 1987-88. However we will point out some important features of provincial subsidies and their impact on trade.

At the national level, agriculture is by far the most heavily subsidized sector. In 1987-88, agriculture received more than 35 per cent of all the provincial support to business. Tax reductions and credit assistance are two of the major expenditures directed to agriculture by most of the provincial governments. All of them also undertake spending on farm and rural infrastructure and act to stabilize farm incomes.

Subsidies as a percentage of gross domestic products for agricultural and related services industries in 1987-88 were estimated at 10 per cent. Therefore, the subsidy rate related to the value of sales could be estimated at 5 per cent. In general, subsidies less than one per cent of production cost are unlikely to affect international trade or domestic production significantly. But with a rate of more than 5 per cent, it is obvious that the effect might be important. Although agricultural subsidies may be comparable in the United States, all the provinces had a subsidy rate large enough for their exports to be countervailable on the basis of current trade laws.

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[11] Provincial transfer payments, as per National Accounts, as a percentage of GDP were at 0.8% in 1987.

[12] Canadian production is about two times larger than GDP. See Jean-François Bence and Murray G. Smith, Subsidies and the Trade Laws: The Canada-U.S. Dimension, *International Economic Issues* (Halifax: The Institute for Research on Public Policy, April-May 1989), p.18.

[13] Not only are support programs of a department not always directed to an industry related to this department, but also a large number of programs cannot be related to any industry without more detailed information.

The amount of provincial subsidies directed to the fishery industry does not look very important with only 1.3 per cent of the total directed to this industry.[14] However, with support programs accounting for about 4 per cent of GDP, it can certainly be regarded as a heavily subsidized industry. Two main reasons explain this phenomenon. First, only some provinces have a fishery industry. Second, we found in our 1989 report on federal subsidies[15] that in 1984-85, the fishing and hunting industry had the highest subsidy rate in Canada. Under these conditions, it is evident that government assistance is affecting the structure of the fishing industry, but the impact on the volume of fish harvested is limited because of quotas in most cases. At the same time, some of these subsidies can influence the location of processing facilities and the cost of production in processing. Thus, the impact on trade is much greater for processed products than primary fish.

Expenditures on reforestation, fire protection and forestry related expenditures accounted for 2.7 per cent of all the estimated provincial subsidies in 1987-88. It is difficult to allocate these expenditures between forest lands utilized for commercial forestry and lands utilized for recreational or other purposes. It is worth noting that in order to respect our analysis of the Public Accounts, our inventory does not include substantial expenditures from the British Columbia Department of Forests and Lands and similar provincial departments, because there are no direct transfers to individuals or firms. However, the question of whether these expenditures are subsidies is the key issue in the softwood lumber dispute.

With respectively 7.7 per cent and 6.7 per cent of total provincial subsidies, the energy and transportation sectors also received significant amounts of subsidies. However, half of provincial support payments directed to the energy sector comes from Alberta. Moreover, most of the subsidies directed to the transportation sector are unlikely to have any effect on trade as little output is traded internationally. The same can be said of subsidies to cultural industries, especially as a large amount of this transfer consists of a subsidy provided by the government of Quebec to La Société de Radio Télévision du Québec.

Conclusion

Despite the fact that provincial support payments have increased faster than the GDP over the last decade, the estimated average of provincial subsidies amounted to only 0.25 per cent of production sales in 1987-88. Consequently, it appears that the overall effect of provincial subsidies on trade is very limited. In our 1989 study on federal transfer payments, we reached the same conclusion and we pointed out that:

> This study indicates that in 1984, excluding agriculture, only a few industries in both countries had, at the federal level, a subsidy rate which was large enough to have a significant effect on trade.

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[14] 1.8 per cent if a one time grant of $17.5 million in Newfoundland is included.

[15] Bence and Smith, Subsidies and the Trade Laws, op. cit. p. 10.

> Explicit federal subsidies in the industrial and services sectors taken together averaged in 1984 about 1 per cent in Canada and 0.5 per cent in the United States. Out of 83 industries, 5 in Canada and 3 in the United States had subsidy rates greater than 5 per cent, while an additional 6 industries in Canada and 10 in the United States had subsidy rates less than 5 per cent but greater than 1 per cent. Moreover, the industries with the highest measured subsidy rate in each country — forestry in the United States and fisheries in Canada — share some of the attributes of the agricultural sector.

The analysis of provincial transfer payments shows that provincial transfers are heavily concentrated in the agricultural sector. Obviously, in this sector and in a few other similar industries provincial subsidies have a significant effect on trade. In contrast, the effects on trade and production in the industrial and services sector appear to be modest. Before drawing any definitive conclusion on the impact on trade of provincial transfer payments, however, further analysis on the distribution of provincial subsidies among industries will be necessary. Furthermore, it is certain that provincial subsidies in specific cases significantly influence investment decisions and can also prevent plant closures.

ANNEX - Inventory of Provincial Subsidies

	Amounts ($ millions)
Newfoundland – 1987-88	
Department of Career Development and Advanced Studies	7.25
Department of Development	10.09
Department of Energy	46.69
Department of Finance	1.19
Department of Fisheries	6.56
Department of Mines	7.94
Department of Rural, Agricultural and Northern Affairs	6.74
Department of Transportation	5.41
	91.87
Prince Edward Island – 1987-88	
Department of Agriculture	7.34
Department of Community and Cultural Affairs	0.05
Department of Energy and Forestry	2.77
Department of Fisheries	1.16
Department of Industry	4.05
Agencies and Crown Corporations	7.01
	22.38
Nova Scotia – 1987-88	
Department of Agriculture and Marketing	18.00
Department of Culture, Recreation and Fitness	0.27
Department of Development	49.55
Funds for Economic Investment	17.15
Department of Fisheries	2.65
Department of Lands and Forests	1.75
Department of Mines and Energy	0.97
Department of Tourism	0.72
Department of Transportation	1.15
Agencies and Crown Corporations	13.35
	105.56

	Amounts ($ millions)
New Brunswick – 1987-88	
Department of Agriculture	6.70
Department of Commerce and Technology	18.50
Department of Fisheries	16.38
Department of Labour	20.73
Department of Natural Resources and Energy	5.20
	67.51
Quebec – 1987-88	
Affaires culturelles	2.56
Affaires municipales	4.97
Agriculture, Pêcheries et Alimentation	342.77
Commerce extérieur et Développement technologique	18.70
Communications	66.13
Conseil exécutif	0.41
Énergie et Ressources	102.07
Enseignement supérieur et Science	0.03
Environnement	0.24
Industrie et Commerce	119.01
Loisir, Chasse, et Pêche	2.39
Main-d'oeuvre et Sécurité du Revenu	21.97
Office de planification et développement du Québec	16.77
Tourisme	2.41
Transports	32.43
	732.86
Ontario – 1987-88	
Ministry of Agriculture and Food	321.72
Office of the Assembly	0.98
Ministry of Colleges and Universities	0.23
Ministry of Consumer and Commercial Relations	28.25
Ministry of Culture and Communications	6.90
Ministry of Energy	14.69
Ministry of the Environment	8.31
Ministry of Industry, Trade and Technology	48.50
Ministry of Municipal Affairs	30.99
Ministry of Natural Resources	3.14

	Amounts ($ millions)
Ontario – 1987-88 (cont'd)	
Ministry of Northern Development and Mines	41.26
Ministry of Revenue	10.77
Ministry of Skills Development	28.70
Ministry of Tourism and Recreation	3.73
Ministry of Transportation	5.16
Ministry of Treasury and Economics	28.47
Agencies and Crown Corporations	46.96
	628.76
Manitoba – 1987-88	
Department of Agriculture	18.54
Department of Business Development and Tourism	4.36
Department of Co-operative Development	1.23
Department of Energy and Mines	1.30
Department of Finance	114.30
Department of Industry, Trade and Technology	3.11
Department of Natural Resources	1.83
	144.67
Saskatchewan – 1987-88	
Department of Agriculture	63.98
Economic Diversification and Investment Fund	17.66
Department of Education	0.24
Department of Environment and Public Safety	1.27
Department of Human Resources, Labour and Employment	3.09
Department of Parks, Recreation and Culture	2.88
Public Service Commission	4.19
Department of Social Services	6.93
Department of Trade and Investment	0.15
Saskatchewan Heritage Fund	30.62
Saskatchewan Water Corporation	7.57
	138.58

	Amounts ($ millions)
Alberta – 1987-88	
Department of Agriculture	185.29
Department of Career Development and Employment	79.33
Department of Culture and Multiculturalism	0.27
Department of Economic Development and Trade	38.60
Department of Energy	47.95
Department of Executive Council	29.01
Department of Technology, Research, and Telecommunications	2.44
Department of Tourism	8.38
Department of Transportation and Utilities	12.98
Treasury	126.63
Regulated Funds and Provincial Agencies	106.86
	637.74
British Columbia – 1987-88	
Ministry of Advanced Education and Job Training	7.76
Ministry of Agriculture and Fisheries	28.06
Ministry of Economic Development	14.01
Ministry of Energy, Mines and Petroleum Resources	4.75
Ministry of Finance and Corporate Relations	6.75
Ministry of Forests and Lands	16.73
Ministry of Transportation and Highways	80.68
Special Accounts and Special Funds	0.03
Crown Corporations and Agencies	15.15
	173.92

THE ECONOMIC DEVELOPMENT POLICIES OF U.S. STATE AND LOCAL GOVERNMENTS: IMPLICATIONS FOR THE CANADA-U.S. FREE TRADE AGREEMENT

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Entering the highly competitive decade of the 1990s, the United States continues to rank as the world's largest economy, the foremost importer and exporter, and as both the largest foreign investor and host nation for foreign investment.[1]

However, in spite of this impressive array of accomplishments, the decade of the 1980s was a difficult period for the United States as it grappled with the exigencies of a complex and interdependent global economy. For example, U.S. exports reached record levels in both 1988 and 1989, but with freight and insurance charges added in, the cumulative U.S. deficit in merchandise trade during the past ten years was close to $1 trillion. The United States also began the 1980s as the world's largest creditor nation, and exited the decade as the largest debtor, with over $600 billion in net overseas obligations. Furthermore, foreign direct investment (FDI), which provides an overseas investor with a controlling interest in an American enterprise, more than quadrupled during the 1980s and resulted in almost four million Americans working for foreign-owned companies in the United States.

At the grassroots level, U.S. state and local officials are keenly aware of the impact which both national and global competition is having on the people they represent. In the spirit of "thinking globally and acting locally," 41 of the states have now opened 120 offices in 24 countries to promote trade, investment, and tourism, almost twice the level of 1986.[2] In comparison, the federal government at the beginning of 1990 maintained 127 special foreign commercial posts in 65 countries. In addition, more states now maintain offices in

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1 Preliminary figures indicate that the United States edged out West Germany as the largest exporter in 1989.

2 National Association of State Development Agencies (NASDA), "Memorandum on State Foreign Offices," March 29, 1989, and *idem*, Directory of Incentives for Business Investment and Development in the United States, 2nd ed. (Washington, D.C.: Urban Institute Press, 1986), p. 5.

Japan (39) than in Washington, D.C. (33).[3] Moreover, in the past five years California's Export Finance Office alone has issued almost as many loan guarantees as the Export-Import Bank of the United States has made nationwide.[4] Major cities also sponsor annual international trade and investment missions, and about 1,000 of America's 36,000 municipal and township governments are actively involved in international programs.[5] All of this subnational activity has occurred during a period when the U.S. Foreign and Commercial Service, the federal agency assigned to help American companies to export, has seen its budget fall by 20 per cent in real terms in the past five years and its staffing reduced by 10 per cent.[6]

Over the past decade, state and local governments in the United States have been actively engaged in developing subnational-level industrial policies, with the goal of protecting and enhancing the economic interests of the constituencies who live within their fixed jurisdictions.[7] A major motivation for this new emphasis is the shrinking transfer

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[3] Governors' Weekly Bulletin, April 14, 1989, p. 1, and National Governors' Association, "State Offices in Washington," December 12, 1989.

[4] Elliot King, "Bridging the Finance Gap for Mid-Sized Exporters," Global Trade, July 1989, p. 18. This statement was made by L. Fargo Wells, executive director of the California Export Finance Office.

[5] The international involvement of municipalities in the United States and Canada is detailed in Earl H. Fry, Lee H. Radebaugh, and Panayotis Soldatos, eds., The New International Cities Era: The Global Activities of North American Municipal Governments (Provo: David M. Kennedy Center for International Studies, Brigham Young University, 1989).

[6] San Francisco Chronicle, November 6, 1989, p. C3. The export promotion staff of the U.S. and Foreign Commercial Service, which is part of the U.S. Department of Commerce, was cut from 142 in 1985 to 115 in 1989, with trade specialists in U.S. field offices cut from 365 to 291, and trade staff in overseas offices, including foreign nationals, cut from 690 to 679.

[7] The notion of subnational "fixed jurisdictions" deserves further explanation. Obviously, U.S. state and local governments have limited territorial boundaries, whereas businesses can be much more mobile. For example, in 1987 the sales of affiliates of U.S.-based multinational corporations (MNCs) surpassed $one trillion, whereas U.S. exports were in the range of $250 billion. The affiliates of U.S.-based MNCs also produce about $500 million worth of products in the European Community each year, while U.S. exports to all of Europe amount to only $70 billion annually. With this in mind, Gary Hufbauer has been prompted to conclude that EC 92 may be a "bonanza for U.S. multinationals, but a question mark for U.S. exporters." (Hufbauer quoted in Bruce Stokes, "Multiple Allegiances," National Journal, November 11, 1989, p. 2757). For state and local governments, the

payments from Washington, D.C. In constant dollars, federal aid to the states and cities peaked in 1978, and fell by almost 40 per cent in real terms from 1980 through 1988.[8] The Gramm-Rudman deficit-reduction measures are expected to exacerbate even further the transfer problems in the 1990s, and the federal government already spends much more on interest payments on the national debt than on state and local government programs. Furthermore, much of the current assistance is linked to mandated health and social welfare programs which are only tangentially linked to economic development activities.[9]

In an effort to achieve some semblance of self-sufficiency and economic diversity at the subnational level, economic development agencies at the state level are devoting over one-half of their time to in-state business development, almost one-third to attracting firms located elsewhere in the United States, and about 15 per cent to attracting foreign companies.[10] At the county and municipal levels, an additional 11,000 economic development groups have been formed across the United States, excluding the 9,000 or so local chambers of commerce.[11] Some observers now refer to the state governments as the

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"bonanza" is clearly in the form of exports from their areas of jurisdiction, whereas the U.S.-based MNCs may have a far different agenda for maximizing profits.

[8] As a fraction of total federal spending, aid to state and local governments fell from 1/6th in 1979 to 1/9th in 1990.

[9] Federal funding to the state and local governments amounted to 115 billion dollars in 1988, 121 billion dollars in fiscal year 1989 and is expected to be 128 billion dollars in fiscal year 1990. However, economic development assistance has been stagnant, whereas Congress and the White House have agreed to pass along additional funds to help defray newly-mandated state and local government responsibilities in the areas of Medicaid and other social welfare programs.

[10] These figures are based on a 1988 NASDA survey and are found in The NASDA Newsletter, November 15, 1988.

[11] Donald Haider, "Marketing Places," Economic Development Commentary, Spring 1989, p. 15. In his address to the 1989 Congress of Cities, National League of Cities' President Terry Goddard emphasized the theme of "self-sufficiency," stressing that municipal governments could no longer count on assistance from Washington, D.C. (Nation's Cities Weekly, December 4, 1989, p. 1). Some state government leaders have used even more brutal terms to refer to the dwindling assistance from Washington, D.C., utilizing such expressions as "fend-for-yourself federalism." The Governor of Michigan has bluntly stated that "Washington has gone from revenue sharing to revenue bleeding." A National Governors' Association official added the following: "The 'feds' have been living on the credit card for years. Now, by mandating us to do the things they can't afford, they're trying to use ours. The idea is they get the credit, we get the bills. But we don't have their ace in the hole: deficit financing," (ibid., August 28, 1989), p. 8.

"dynamos" of the U.S. federal system, and there is no doubt that their policies will have a growing impact during the 1990s upon U.S. commercial relations at home and abroad.[12]

Therefore, the intent of this article is to acquaint the reader with the mushrooming involvement of U.S. subnational governments in the regional, national, and global economy, to explain why this has occurred, and then to examine the implications of these policies for the Canada-U.S. Free Trade Agreement.

State and Local Governments as Powerful Economic Actors

The ability of U.S. state and local governments to influence domestic and international commerce positively or negatively should not be underestimated. Among the 25 leading nations in the world ranked by gross national product (GNP), one could insert 12 states. Moreover, America's smallest state, Vermont, would rank 67th among the approximately 170 nation-states in the world. California, with its 29 million people, now accounts for more than $600 billion in annual gross state product, and would rank as the seventh largest country globally. New York is not far behind with its top 10 ranking, and Texas alone produces more than neighbouring Mexico. These states are also important trading clients for many countries, with California ranking as Japan's second leading partner after the rest of the United States.

Furthermore, the annual budgets of states such as California and New York, which are now approaching $50 billion, are surpassed by only a handful of national governments around the world. To put this purchasing power in perspective, California's budget is four times greater than the Philippines', a nation with 56 million people. At the municipal level, New York City's annual budget is also twice as large as that of the Philippines, and the four-county greater Los Angeles metropolitan area, with an annual production of goods and services exceeding $250 billion, ranks as the eleventh largest economic power in the world ahead of Australia, Switzerland, and India. In 1986, total state and local government personal income, sales, and property tax receipts were greater than the federal government's personal income tax revenues, and state and local government purchases of goods and services amounted to 85 per cent of non-defence purchases by all levels of government in the United States.[13] In 1988 alone, state and local governments in the United States

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[12] In Neal R. Peirce, "States: Dynamos of the Federal System," State Government News, December 1989, p. 23, the author asserts that the "1980s indisputably have been the decade of state governments. Those in doubt need only take a look at virtually any major domestic policy-making arena — care, education, environmental protection, homelessness, infrastructure, foreign trade promotion and health-care cost containment."

[13] R. Scott Fosler, "The State Economic Role in Perspective," in The New Economic Role of American States, ed. R. Scott Fosler (New York: Oxford University Press, 1988), p. 17.

accounted for $648 billion in expenditures, of which $584 billion were earmarked for the purchase of goods and services.[14]

Financial Incentives to the Business Sector

The National Association of State Development Agencies (NASDA), in its periodic survey of the states, suggests that one of the major trends of the 1980s was "the enormous increase in business financing programs."[15] In 1988, 48 state governments offered tax exemptions on goods in transit; 45, tax exemptions for raw materials used in manufacturing; 44, tax exemptions for manufacturers' inventories and new equipment; 38, loans for building construction and the purchase of equipment and machinery; 35, tax incentives for job creation; 34, corporate income tax credits for enterprise zones; 32, tax incentives for industrial investment; 31, financial incentives for establishing industrial plants in areas with high unemployment; 28, funding for venture capital programs; 28, personal income tax exemptions; 25, tax incentives for research and development projects; 19, excise tax exemptions; and 18, tax credits for new investment (see Tables I through IV).[16] These programs are in addition to federal assistance provided through the Small Business Administration (SBA) loan and loan guarantee programs, the Urban Development Action Grants (UDAGs), the Community Development Block Grants (CDBG), the Business and Industrial Loan programs, the Economic Development Agency (EDA) programs, the HUD Section 108 program, the Job Training Partnership Act (JTPA) program, and a wide variety of defence and other related programs.[17]

That same year, 44 states authorized state revenue bond financing and 49 permitted municipal or county revenue bond financing. Long-term tax-exempt bonds have been an extremely important economic development tool for state and local governments over the past few decades, with $687 billion in all types of long-term state and local tax-exempt bonds issued in the five-year period ending in 1988 in the 50 states, the District of Columbia, and the U.S. territories in Guam, Puerto Rico, and the Virgin Islands. Recently, the issuance of tax-exempt bonds has been severely hindered as a result of the 1986 Tax Reform Act, and potentially by a Supreme Court decision rendered in April 1988 which

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[14] David F. Sullivan, "State and Local Government Fiscal Position in 1988," Survey of Current Business, February 1989, p. 20.

[15] ASDA, Directory of Incentives, p. 25. The editors made this comment in reflecting on the major differences in findings between the first edition of this book in 1983 and the second edition in 1986.

[16] Keon S. Chi, Economic Development in the States: The States and Business Incentives (Lexington, Ky.: Council of State Governments, 1989), pp. 1-9.

[17] The UDAG program was to be phased out in September 1989 with plans to replace it with a federal enterprise zone program.

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gives Congress a green light to tax interest on state and local government-issued bonds. Nonetheless, the authority to issue small-issue industrial development bonds has been extended by the federal government through 1990 and will likely be prolonged even further into the 1990s. Consequently, state and local governments may continue to issue up to $10 million in tax-exempt bonds to finance specific manufacturing projects. Some states, such as California, have even authorized the use of general obligation bonds to help local governments finance business development.[18] Subnational governments may also issue an unlimited amount of "taxable" bonds which are frequently exempted from state and local taxation.

Targeted Investment Attraction and Retention

Many states and communities have been engaged in a rather controversial policy of offering lucrative incentive packages in order to attract or retain individual businesses. Frequently, the incentive packages run into the tens of millions of dollars per deal and include: (1) tax forgiveness for up to 20 years, (2) low-interest loans, (3) grants, (4) donations of land, and (5) job-training subsidies.[19] For example, the Minnesota legislature passed a $1.2 billion three-year incentive package in an unsuccessful bid to lure General Motors' Saturn auto assembly plant, including $800 million in tax breaks, $93 million in direct costs, and $371 million in incentives from the private sector.[20] In 1989, Sears received from the state of Illinois and the town of Hoffman Estates an incentive package worth $178 million, and the right to develop 600 acres of free land commercially over a 20-year period, in return for basing its merchandise group in this prosperous community 35 miles northwest of Chicago. This group had previously been based in Chicago since 1887.[21] In 1985, the state of Illinois, McLean County, and the cities of Normal and Bloomington pieced together an incentive package worth $168 million to attract the Chrysler/Mitsubishi Diamond Star auto plant. The package included the creation of a special enterprise zone authorized to operate through 1998 and such benefits as (1) infrastructure improvements specifically geared to Diamond Star's requirements, (2) services such as worker training and Japanese-style education for the children of Japanese managers, (3) tax abatements, and (4) priority access to industrial revenue bonds.[22]

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[18] California voters provided this authorization when they approved Proposition 46 in 1986.

[19] Robert Guskind, "Games Cities Play," National Journal, March 18, 1989, p. 634.

[20] Chi, p. 1.

[21] City and State, July 3, 1989, pp. 2 and 23.

[22] Ann H. Elder and Nancy S. Lind, "The Implications of Uncertainty in Economic Development: The Case of Diamond Star Motors," Economic Development Quarterly I no. 1 (1987): 36.

In order to retain businesses and the accompanying jobs in New York City, since 1983 municipal and state officials have provided Chase Manhattan with incentives worth $235 million, NBC $98 million, Shearson Lehman Hutton — $74 million, Drexel Burnham Lambert — $85 million, Citicorp — $97 million, and Dreyfus Corp. an annual incentive of $4 million. In addition, AT&T was provided with $42 million in tax breaks by the city to build its headquarters in Manhattan, and the luxurious Trump Tower on 5th Avenue, with its million-dollar condos and six levels of retail space, was subsidized with $100 million in tax abatements. Indeed, New York City officials have deliberately assessed commercial property at no more than 60 per cent of fair market value. For example, the Pan Am Building was sold for $400 million in 1980, but its assessed value was only 25 per cent of the selling price. Manufacturers Hanover Trust Building sold for $161 million in 1981, but carried an assessed value of 20 per cent of the actual purchase price.[23] It is estimated that New York City's incentive programs have cost at least $2 billion in public revenues over the past decade (see Tables V and VI for a list of current New York State and New York City incentive programs).[24]

Other leading business attraction incentive packages include the 60 million dollars pledged to Sematech to locate in Austin, Texas, and the $50 million to Burlington Air Express to build a hub in Toledo. Detroit has also handed out about $100 million in tax abatements over the past few years, mostly to the automakers, and Indianapolis provided $155 million in tax abatements from 1984 through 1987.[25] Pennsylvania won the ill-fated battle among the states to attract a Volkswagen assembly plant, offering an incentive package valued in excess of $70 million. VW closed its Pennsylvania plant in 1988, but will continue to collect incentives through most of the remainder of the century. In later bidding contests, Ohio agreed to provide Honda with $70 million in incentives, Tennessee offered Nissan $66 million, Michigan offered Mazda $120 million, and Kentucky will provide Toyota with an estimated $325 million dollars over a 20-year period.[26]

Financial Assistance to Start-Up Businesses

Forty-three states have started or revamped support programs for small businesses, with at least 13 now sponsoring venture capital projects to help these small firms to develop. Some of these states have also begun to tap state and local government pension fund assets which now exceed $300 billion. For example, a 1983 law allows the Michigan State government

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[23] Bernard J. Frieden, "The Downtown Job Puzzle," Public Interest, Fall 1989, pp. 80-81.

[24] Guskind, "Games," p. 635.

[25] Ibid., pp. 635-636.

[26] The Kentucky-Toyota episode is discussed in the Wall Street Journal, June 9, 1987, p. 33.

to invest up to five per cent of its $15 billion public employee pension funds into venture capital projects. The state has invested over $320 million in venture capital projects spread among 23 private-venture capital funds, two groups specializing in leveraged buy-outs, and 37 fledgling companies.[27] Pennsylvania also maintains four separate venture capital funds and has invested over $50 million in new ventures. Ohio's public pension funds have invested about $140 million in new ventures since 1983 and Indiana offers tax credits to its citizens who invest in a venture capital fund which supports Indiana's businesses.[28] State and local governments have also been actively involved in supporting "incubators" which provide low-cost office space for start-up companies, often near research universities. There are currently 330 incubators nationwide in more than 30 states, up from 40 incubators in 1984.[29]

For the year 1987, it is estimated that state governments invested approximately 700 million in programs to support start-up businesses.[30]

Worker Training

Many states are also prepared to offer state-financed, customized training for workers of specific companies, with California's Employment Training Panel and Illinois' Prairie State 2000 Authority being among the most ambitious. California's Employment Training Panel was established in 1982 and has had reserves of more than $60 million per year from California's unemployment insurance fund to "help business equip itself with the skilled work force it needs to increase competitiveness and productivity." The panel reimburses the training costs for companies that are starting up, expanding, retooling, or restructuring. The targeted company chooses what training is needed and selects the curriculum, trainer, and trainees. The California panel will then subsidize the training for workers who have either been laid off or are in need of training to avoid future layoffs. The employer would then be reimbursed for expenses after the worker has been employed for 90 days in the job for which he or she had been trained.[31]

The Illinois program is authorizing about one million per year in grants and also offers special loans to retrain workers. The program is geared towards any employer "who is expanding its business enterprise in this State, is locating a new business enterprise in this

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[27] Joan C. Szabo, "State Funds for Start-Ups," Nation's Business, June 1989, p. 44, and the Wall Street Journal, August 11, 1988, pp. 1 and 17.

[28] Inc., October 1988, p. 79.

[29] Wall Street Journal, June 16, 1989, p. B1.

[30] Ibid., January 13, 1989, p. B2.

[31] Harry Bacas, "Tailor-Made Work Forces," Nation's Business, November 1989, p. 33.

State, is introducing more efficient technology into its operations which will result in greater output per employee, is expanding into new markets, or is expanding exports from Illinois, and is thereby increasing tax revenues for State and local governments."[32]

It is generally anticipated that these state-financed, workplace-based training programs targeted at individual companies will become the norm in most states during the 1990s.[33]

In a related area, the states of New York, Michigan and Wisconsin have implemented programs to facilitate Employee Stock Ownership Plans (ESOPs), with Michigan's state government also willing to back the issuance of bonds to facilitate employee buyouts of their companies.[34]

Enterprise Zones and Related Programs

The enterprise zone program began in Connecticut in 1982 and now has spread to 36 other states and the District of Columbia. More than 1,500 zones have been approved, with Louisiana by itself designating up to 750. Moreover, nearly the entire cities of Toledo and Cleveland are now huge enterprise zones.

In terms of financial incentives, the Evansville, Indiana enterprise zone may serve as a typical example of the zones currently in operation in the United States. Firms willing to locate in the zone are eligible for state tax credits for interest on loans, employee wages (up to $1,500 per employee), and property taxes, plus city tax exemptions for inventory and for finished goods sold outside Indiana.[35]

California designated its 19th zone in 1989, with most operating only over the past couple of years. Approximately $3 million in state incentives are currently available to a plant employing 100 workers, with the two major tax benefits being a credit of up to $19,000 for hiring economically disadvantaged employees and a sales tax credit of up to $1.2 million per company on certain equipment and machinery purchases. Businesses would also be entitled to a 100 per cent net-loss carryover from year to year, accelerated depreciation

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[32] Quoted from Illinois brochure in Peter A. Creticos and Robert G. Sheets, State-Financed, Workplace-Based Retraining Programs, (Washington, D.C.: National Commission for Employment Policy and National Governors' Association, 1989), pp. 13-14.

[33] This is the conclusion of the authors in ibid.

[34] National Council for Urban Economic Development, Business Retention Strategies, October 1988. p. 16.

[35] The NASDA Newsletter, January 6, 1989, p. 3.

allowances, tax-free interest on special loans, and preferential treatment in the allocation of certain industrial development bonds.[36]

Almost all the states limit the designation of enterprise zones to depressed areas with endemically high unemployment. However, as has been the case with tax incentive financing (TIF), these rules have been ignored at times for the sake of expediency. As an illustration, enterprise zones were created for Sears and Chrysler/Mitsubishi in Illinois in communities which were prosperous and already offered a high quality of life.[37] When Chrysler threatened to shut down another Illinois plant in 1985, Governor James Thompson declared the entire plant an enterprise zone, entitling the automaker to industrial revenue bonds, tax abatements, and job-training funds worth $15 million dollars.

TIF is a special financing program which helps cities to circumvent federal restrictions on the issuance of tax-free bonds to assist the business community. A city sets up a redevelopment district around a proposed project, estimates the tax revenues which will be generated over a 20-to-25 year period, and then issues tax-exempt bonds. Future revenues from the completed project will then be used to service the bond debt. California first used TIF in the 1950s for clearing away slum areas, but since the 1986 federal tax reforms, cities and states across the nation have been using TIF for a wide variety of economic development projects. For example, Detroit used it initially to develop property to be used for General Motors' Poletown plant. The initial financing was supposed to have been $100 million, but the price tag eventually escalated to over $300 million, and Detroit is currently paying $10 million a year in interest with a $50 million balloon payment due in 1996. Furthermore, once the property was developed, it was donated to General Motors.[38] The prosperous community of Hoffmann Estates, Illinois is using TIF to assist Sears. Officials in Marion, Illinois declared the whole city a blighted area in order to issue TIF bonds for a suburban shopping center. Community leaders in Indianapolis are also using $200 million in TIF funds to develop a downtown mall.

Total government financial assistance in the form of enterprise zones and TIFs is difficult to compute. The Reagan and Bush administrations' proposals to create from 70 to 100 federal enterprise zones have been estimated to cost from $400 million to $1.6 billion per year.[39] If ever enacted, this package would likely include wage and investment

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[36] Michael Smolens, "Enter the Enterprise Zone," Golden State Report, June 1989, pp. 26-28.

[37] Elder and Lind, p. 39, and City and State, July 3, 1989, pp. 2 and 23.

[38] Guskind, "Games," p. 638.

[39] Economic Development, August 1, 1989, pp. 1 and 5, the Washington Post, January 9, 1989, p. A9, and the White House, Building a Better America (Washington, D.C.: U.S. Government Printing Office, 1989), pp. 63-64. The higher figures are estimates from the U.S. General Accounting Office.

tax credits and a capital gains tax exemption. Currently, there are over 500 "active" state-sponsored enterprise zones in operation, with most offering a combination of the following: (1) local property tax abatements; (2) tax credits for hiring new employees; (3) sales tax breaks; (4) tax deductions for capital improvements; (5) low-interest loans; (6) outright grants for businesses; (7) job training funds; (8) new public spending for infrastructure; and (9) government-sponsored marketing for the zone.[40] A HUD report released in 1987 estimates that the enterprise zones have saved or created 180,000 jobs and attracted $8.8 billion in private capital, whereas a more recent Business Facilities survey estimates 184,000 jobs were created, 169,000 jobs retained, and $18.1 billion in private investment attracted through 1988.[41] Other studies, however, have concluded that enterprise zones have had only a marginal influence on private investment decisions.[42]

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[40] Robert Guskind, "Zeal for the Zones," National Journal, June 3, 1989, p. 1359. In 1989, among the 37 states and the District of Columbia which had established enterprise zones, 24 states offered to businesses employer income tax credits; 22, wage or job creation credits; 21, sales tax relief; 19, credits for selective hiring; 19, regulatory relief measures; 16, property tax reductions; 14, direct loans; 11, investment credits for real improvements; 10, tax incentive financing; 8, credit for interest paid on business loans; 6, preferential access in the allocation of tax-exempt bonds; 4, employee income tax credits. See Raymond C. Scheppach, Executive Director of the National Governors' Association, "Testimony before the Ways and Means Committee, U.S. House of Representatives, October 17, 1989."

[41] Guskind, "Zones," p. 1359. Two other generally positive studies on the impact of enterprise zones are Rodney A. Erickson and Susan W. Friedman, Enterprise Zones: An Evaluation of State Government Policies (Washington, D.C.: U.S. Department of Commerce, Economic Development Administration, 1989); New Jersey Department of Commerce, The New Jersey Urban Enterprise Zone Program: An Evaluation, July 1989; and office of Program Analysis and Evaluation, U.S. Department of Housing and Urban Development, State-Designated Enterprise Zones: Ten Case Studies (Washington, D.C.: U.S. Government Printing Office, 1986).

[42] One skeptical report was issued by the Congressional Research Service in June 1989 and entitled Federal Tax Incentives for Enterprise Zones: Analysis of Economic Effects and Rationales. Another skeptical study is by the U.S. General Accounting Office, Enterprise Zones: Lessons from the Maryland Experience (Washington D.C.: U.S. Government Printing Office, 1988). A report calling for significant modifications in the program, including more targeted public assistance, is Dan Y. Dabney's "Enterprise Zones and Their Relationship to Business Location Decisions," 1989.

One must also emphasize that targeted economic development policies are not limited to urban areas. Many parts of rural America have suffered significant economic setbacks and population loss during the past decade.[43] In an effort to help their mostly rural-based coal industry and workers, in 1985 Ohio voters approved the issuance of $100 million in bonds to support research on the clean use of Ohio's high-sulphur coal and to establish the Ohio Coal Development Office. The Pennsylvania Rural Economic Development Act of 1987 provides assistance for research and demonstration projects related to the disposal and reuse of brine and other wastewaters produced in conjunction with oil and gas operations. Other legislation passed in 1987 directs Pennsylvania's Department of Commerce to assist in the creation of a non-profit agency to promote the state's hardwood industry. That same year, Montana established an Agricultural Development Council which helps to create business incubators and to make seed capital grants in agrarian areas of the state.[44] Many other states have also established programs which offer direct financial assistance for economic development in their rural areas. The federal government, of course, also sponsors its share of rural-oriented programs, with the Rural Electrification Administration (REA) alone having provided an estimated $50 billion in economic subsidies to borrowers from 1973 through 1988.[45]

Technology Grants

In all, U.S. state governments have created over 100 public investment funds to make loans to or invest in businesses. Forty states have also set up over 200 programs to stimulate technological innovation, including the highly-publicized Ben Franklin Partnership in Pennsylvania and the Thomas Edison program in Ohio which provide state grants to augment private funds for applied research projects.[46] Twenty-five states also support

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[43] Almost 75 per cent of America's rural communities lost jobs and 50 per cent lost population from 1980 through 1987. This was during a period when the nation as a whole created 13 million net new jobs. The poverty rate of the nonmetropolitan population in 1985 was 18.3 per cent, compared with 12.7 per cent for city residents. See Charles Bartsch and Andrew S. Kessler, Revitalizing Small Town America: State and Federal Initiatives for Economic Development (Washington, D.C.: Northeast Midwest Institute, 1989), pp. 1-2.

[44] These illustrations are found in DeWitt John, Sandra S. Batie, and Kim Norris, A Brighter Future for Rural America? Strategies for Communities and States (Washington, D.C.: National Governors' Association, 1988), p. 61.

[45] These subsidies are computed on a "life-of-loan" basis. See the Executive Office of the President, Office of Management and Budget, Major Policy Initiatives: Fiscal Year 1989 (Washington, D.C.: U.S. Government Printing Office, 1988), p. 37.

[46] David Osborne, Laboratories of Democracy (Cambridge, Mass.: Harvard Business School, 1988), p. 1.

biotechnology centres and are spending about $40 million a year on these facilities.[47] A leading program is in California, where the state Commerce Department's Office of Competitive Technology (OCT) provided $6.6 million in funding in 1988-89 for seed capital that permits private firms, universities and research facilities to undertake the commercialization of new technologies.[48]

To put subnational government assistance in perspective, the states in 1988 provided 48 per cent of all funding for technology transfer programs targeted at small and medium-sized businesses, compared with 26 per cent from the federal government and 26 per cent from the combined efforts of local governments and private groups. As outlined by the National Governors' Association, most of the state funding is channelled into programs to "help U.S. manufacturers obtain and use new and existing technologies, modernize their manufacturing processes, and improve their productivity and profitability."[49] In their quest to attract and retain high-technology businesses, 12 states offer all of the following incentives, with most other states offering a majority of these incentives: (1) funds committed to venture capital programs; (2) entrepreneurial assistance; (3) R & D grants; (4) technology transfer centre programs, (5) funds committed to establish incubators; (6) tax exemptions to encourage R & D; (7) authorization for university R & D facilities to be made available to industries; (8) state science or technology advisory councils; and (9) funds committed for the development of research parks.[50]

Export Assistance

All 50 states and many major municipalities now provide significant export assistance to small and medium-sized firms. The states spent $62 million in staffing and maintaining their trade departments in 1988, almost double the 1984 expenditures.[51]

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[47] Governors' Weekly Bulletin, April 15, 1988, pp. 1 and 2.

[48] California Council for International Trade, Bulletin, September 1989.

[49] Governors' Weekly Bulletin, November 24, 1989, p. 3, and the National Governors' Association Center for Policy Research, Promoting Technological Excellence: The Role of State and Federal Extension Activities (Washington, D.C., National Governors' Association, 1989).

[50] Economic Development, August 1, 1989, p. 5. On the average, a state offers 6.6 of these 9 incentives.

[51] Office of State Services, International Trade (Washington, D.C.: National Governors' Association, 1989), p. 47. Please also consult NASDA, State Export Program Database (Washington, D.C.: NASDA, 1988).

Export Financing

At the end of 1988, 27 states had passed legislation to implement some form of export financing. Twenty-two of these programs were operational with over $32 million allocated for financing purposes, most commonly for loan guarantees to commercial banks willing to issue loans to small and medium-sized exporters. The California Export Finance Office (CEFO) is a leader in providing financial support to small and medium-sized businesses. Since its inception in 1985 through the end of October 1989, CEFO guaranteed 181 working-capital loans representing $34.6 million and export sales of $154 million (see Table VII). The U.S. Export-Import Bank is also working with 12 state and city governments to provide joint financing and other types of assistance to small and medium-sized firms, helping to support $40 million in exports through the end of 1989. In addition, the states of Michigan and Illinois have established shared Foreign Sales Corporations (FSCs) which permit participating companies to be eligible for a 15 to 30 per cent federal tax exemption. Delaware has also formed a FSC partnership with Price Waterhouse to offer both federal and state tax exemptions to small exporters.[52] The shared FSC is a corporation which allows up to 25 separate businesses to band together in a single export company to share expertise and costs and to take advantage of the tax exemption.

Other Types of Export Assistance

All 50 states conduct trade seminars and provide a host of other assistance programs to companies interested in exporting goods or services (see Table VIII).[53] Approximately 220 California companies participated in California World Trade Commission trade show exhibits from 1985 through the spring of 1989, facilitating $66 million in export sales. These exhibits were focused on such areas as aerospace, telecommunications, computers, medical and scientific instruments, sports and leisure, and energy and environmental technologies.[54] The National Governors' Association has also established a special ExpoLink database service to be used by the states to ascertain three-digit level standard industry classification (SIC) export leads.[55] At the local level, the U.S. Conference of Mayors has conducted trade exhibitions abroad since 1980, permitting city officials to promote their goods.[56] All

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[52] Office of States Services, p. 36, and William Treadwell, "Advising Your Client on New Export Incentives," ABA Journal 75 (September 1989): p. 78-79.

[53] Governors' Weekly Bulletin, April 14, 1989, p. 1.

[54] California World Trade Commission, Newsletter, Spring 1989, pp. 1 and 3.

[55] Governors' Weekly Bulletin, December 15, 1989, p. 3.

[56] Peter K. Eisinger, The Rise of the Entrepreneurial State (Madison: University of Wisconsin Press, 1988), p. 296.

of these programs help to reduce the costs for companies to gather export data and to market their products abroad.

Subnational Governments and the FTA: The Issue of Subsidies

Under Chapter 19 of the Canada-U.S. Free Trade Agreement, the two North American neighbours have from five to seven years to define what constitutes a subsidy and then to determine how such subsidies will be treated under the bilateral accord. Both sides are also in general agreement that the policies of subnational governments such as state, provincial, and municipal governments must be included in the overall subsidy discussions.

Without any doubt, U.S. subnational governments, which in their own right are powerful economic actors, are now more actively involved in the economic sector than at any other time in the 20th century, assuming the roles "of market developer, broker, financial partner, and risk-bearer."[57]

With this activist role in mind, what amount of money over the past decade has been transferred from subnational governments to their business communities in the form of targeted financial and other types of direct assistance? (See Table IX for a more expansive list of assistance programs.) This is extremely difficult to calculate and only rough estimates can be made. A National Governors' Association report suggests that the states spent 20 billion on financial assistance to businesses in the year 1981, including incentives designed to attract new businesses or retain existing ones, but excluding public investment in human resources, universities, research institutions and physical infrastructure.[58] Nor does it include county and city spending. If this figure is roughly accurate and if 1981 were fairly typical of the entire decade, then state governments alone may have provided around 200 billion in financial assistance during the 1980s.

The Public Securities Association (PSA) calculates that $687 billion in all types of long-term tax-exempt bonds were issued by state and local governments between 1984 and 1988. If these bonds had been taxable, the PSA estimates the additional interest costs until the year 2000 would have been $284 billion.[59] Using a similar formula for calculating interest savings for businesses, $220 billion worth of tax-exempt industrial development

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[57] Ibid., p. 333.

[58] DeWitt John, Shifting Responsibilities: Federalism in Economic Development (Washington, D.C.: National Governors' Association, 1987), pp. 69-70, and Roger Wilson, Economic Development in the States: State Business Incentives and Economic Growth: Are They Effective? A Review of the Literature (Lexington, Ky: Council of State Governments, 1989), p. 3.

[59] Public Securities Association, Facts on Tax-Exempt and Taxable Municipal Bonds, May 1989, p. 1.

bonds were issued by subnational governments between 1979 and 1989, leading to savings in interest charges of $103 billion. If private-exempt entity bonds which assist private hospitals, educational facilities, and similar organizations are included, an additional $63 billion in savings would be added to the equation (see Table X).[60] These figures do not include "taxable" state and local issuances which are often exempted from both state and local taxes.[61]

Based on published estimates of the costs of the proposed federal enterprise zone program and for the existing enterprise zone program in Indiana, one can make a rough calculation that the 500 zones currently in operation provide at least $1 to $2 billion in financial assistance annually to the private sector.[62] The plethora of other state and local government assistance programs mentioned in this article, ranging from business attraction and retention to export financing and venture capital funding add up to perhaps $5 billion per year.[63] Thus, at the end of the 1980s, the total annual tab for targeted assistance at the subnational level was over $20 billion for non-agricultural businesses; expenditures and lost

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[60] These savings were calculated by using the PSA's computation of a 2.65 percentage point differential in 1988 between Moody's average A-rated tax-exempt municipal bonds (7.59 per cent) and taxable A-rated corporate bonds (10.24 per cent) and assuming the life of the bonds would be at least 12 years. In the mid-1980s, the average maturity for small-issue industrial development bonds was about 14 years and for other industrial development bonds about 20 years.

[61] In 1988, almost $3 billion in long-term taxable state and local issuances was recorded, with over $200 million going for industrial development and economic development purposes. See Public Securities Association, p. 9.

[62] Indiana had 12 enterprise zones in 1989 and calculations made by Margaret Wilder of Cornell University and Barry Rubin and Bruse Nissen of the University of Indiana suggest that each of these zones costs at least $1 to $2 million per year in lost tax revenues, exclusive of direct financial assistance and targeted infrastructure improvements (see Guskind, "Zones," p. 1360). The state of Florida and Dade County spent approximately $12 million preparing the Poinciana Industrial Centre in Miami, and this does not include tax breaks and other types of assistance (Newsweek, March 6, 1989, p. 43). There is no such thing as a "typical" zone because of the wide variety of incentive packages pieced together by the 37 states and the District of Columbia. Nonetheless, the $1 to $2 billion aggregate figure is both a reasonable and conservative estimate.

[63] This estimate is derived from individual calculations of state and local government programs and from data provided in NASDA, 1988 State Economic Development Expenditure Survey (Washington, D.C.: NASDA, 1988).

revenues for the decade approached $200 billion.[64] Although the 1986 tax reforms placed a damper on some tax-exempt industrial revenue bond issues later in the decade, state and local economic development programs in general proliferated dramatically during the 1980s with budgets often tripling or quadrupling.[65]

Moreover, the figures quoted above generally do not include funding for transportation, sewage and waste disposal facilities, and other related activities which are often integral parts of state and local campaigns to attract or retain specific businesses, nor the tens of billions of dollars in direct financial assistance for economic development transferred annually from Washington, D.C. to the subnational governments. In addition, these expenditures and lost revenues do not begin to approximate the amount of business activity which was generated as a direct result of subnational government assistance. California officials estimate that for every one dollar of assistance provided in the form of loan guarantees, almost five dollars in exports are generated (see Table VII). Whether in the form of export financing, enterprise zone incentives, or start-up business assistance, state and local government commitments are generally "last-resort" funding, meaning that commercial banks and other private sources have refused to provide any loans or equity financing. Consequently, without this active state and local government infusion of funds and the provision of other incentives, billions of dollars in annual business activity would never take place.

Yet, in spite of this seemingly high price tag, the vast array of state and local government assistance programs should not be subjected to blanket criticism. Such direct and indirect assistance by state and local governments to businesses will make it imperative

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[64] These estimates coincide fairly closely with a National Governors' Association report suggesting that the state governments may have spent $20 billion on financial assistance to businesses in the year 1981, including incentives designed to attract new businesses or retain existing ones, but excluding public investment in human resources, universities, research institutions and physical infrastructure, and all targeted country and city spending. Thus, if this figure is roughly accurate and if 1981 were fairly typical of the entire decade, then state governments alone may have contributed in the range of $200 billion in targeted assistance to the private sector during the 1980s. See DWitt John, Shifting Responsibilities: Federalism in Economic Development (Washington, D.C.: National Governors' Association, 1987), pp. 69-70. In reaching his conclusion, the author relied on previous estimates found in William Hamilton, Larry Ledebur, and Deborah Matz, Industrial Incentives: Public Promotion of Private Enterprise (Washington, D.C.: Aslan Press, 1985), p. 147. Please also see Roger Wilson, Economic Development in the States: State Business Incentives and Economic Development in the States: State Business Incentives and Economic Growth: Are They Effective? A Review of the Literature (Lexington, Ky.: Council of State Governments, 1989), p. 3.

[65] NASDA, 1988 Expenditure Survey, pp. 4-10.

for U.S. negotiators to define very carefully what is meant by a harmful and a benign subsidy.

Indeed, if the United States is to become more competitive internationally, it is essential that people, governments, and businesses at the grassroots level think "globally" and implement strategies which will facilitate growing U.S. competitiveness. Consequently, in an effort to enhance the interests of their business communities, subnational governments in the United States have implemented many policies which are desperately needed. At the end of the 1980s, 70 per cent of the goods produced in the United States were subject to direct competition from foreign products in America's own marketplace, versus only 20 per cent in the 1960s.[66] Traditionally, many small and medium-sized U.S. businesses have been satisfied to service local and regional markets and have not given a thought to producing goods or services that would be globally competitive. Indeed, in the mid-1980s the President's Commission on Industrial Competitiveness estimated that 250 large firms accounted for 80 per cent or more of all American exports.[67] In a rapidly globalizing economy, small and medium-sized businesses risk becoming the dinosaurs of the 1990s, losing market share to both large U.S and foreign enterprises.

In an effort to prevent this extinction, U.S. state and local governments are instituting a wide variety of policies to assist these businesses to remain competitive at home and abroad. The impetus for greater export activity which will help to erase America's huge trade deficits must largely be provided at the local level. Both state and municipal governments are providing workshops for small and medium-sized firms which desire to export. They are also furnishing technical assistance and helping these firms to obtain private financing for export activity. The development of business incubators, greenhouse projects, technology ventures, and related endeavours should also result in greater U.S. exports. Above all, both U.S. state and local governments must have an international orientation and emphasize the development of a favourable business climate stressing education, technology, a skilled work force, a modern infrastructure, a competitive financial network, and a high quality of life.[68]

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[66] Osborne, p. 3.

[67] The President's Commission on Industrial Competitiveness, Global Competition: The New Reality, vol. 2 (Washington, D.C.: U.S. Government Printing Office, 1985), p. 205. Not everyone agrees with these statistics. Mike Farrell, chief of data analysis and planning for the foreign trade division of the U.S. Census Bureau, estimates that 2,500 or even 25,000 firms account for 85 percent of U.S. exports, but admits that there is a glaring lack of reliable trade statistics. See the San Francisco Chronicle, November 6, 1989, p. C3.

[68] For a more detailed treatment of economic development strategies, consult R. Scott Fosler, "Conclusion," in New Economic Role, pp. 312-329.

Arguably, some of these subnational policies may be short-sighted and wasteful. Far too often, subnational governments fail to cooperate in promoting economic development projects which can bring benefits which transcend state and local boundaries.[69] Likewise, financial incentives given to certain companies may provide them with an unfair advantage over competitors which do not receive such incentives. Moreover, 49 of the 50 states require balanced budgets, meaning that targeted incentives may take money away from education, welfare, health care, and infrastructure improvements.[70] Most studies also indicate that investment incentives tend to be given a low priority in corporate decisions concerning site locations.[71]

On the other hand, the future of some U.S. incentive packages may well be linked to what transpires in Canada. Once the Free Trade Agreement is fully implemented at the end of the 1990s, firms situated in Canada will have open access to most sectors in the 250 million-strong American marketplace. Canadian cities and provinces are now actively recruiting foreign companies, insisting that Canada can offer a better quality of life and still serve as the "gateway" to the huge U.S. market. If Ottawa and the provincial and municipal governments continue to ante up significant financial packages to recruit these businesses, there is no practical reason for American subnational governments to forsake their own incentive programs.

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[69] As Eisinger insists in his book (p. 4), "[q]uestions of national economic efficiency or well-being are often lost in the competitive struggle to achieve local prosperity and security." R. Scott Fosler adds, "there needs to be a more aggressive effort to integrate economic policy among state and local governments, and among neighboring states, to focus on the needs of regional economies" ("State Economic Policy: An Assessment," Business in the Contemporary World I (Summer 1989) p. 96). Fortunately, the National Governors' Association, some regional groups such as the Western Governors' Association, and some local groups such as the Mid-South Common Market are beginning to focus their efforts on greater regional coordination and cooperation. As an illustration of this trend, consult Jerry Levine, Going Global: A Strategy for Regional Cooperation (Denver: Western Governors' Association, 1989).

[70] As Dennis O. Grady suggests in his article, "State Economic Development Incentives: Why Do States Compete?" State and Local Government Review 19 (Fall 1987) p. 93, "because of the states' balanced budget requirements, reducing business taxation requires decreasing services or increasing other consumer-based taxes, actions which raise serious questions about the social equity of the entire business incentive system." In the Economist, February 18, 1989, p. 28, the editors refer to subnational governments providing funds to persuade industries from leaving as "protection money."

[71] See Eisinger, p. 222.

Growing exposure to the international economy has also prompted far too many state and local governments to adopt protectionist policies designed to help marginally competitive local industries to survive. Forty-six states maintain some form of Buy American or Buy State provisions for state and local government procurements, an increase of one-third since the late 1970s. These provisions restrict or eliminate foreign firms from bidding on more than $20 billion in government contracts annually. Thirty-six state legislatures have also enacted anti-takeover statutes, many patterned after Indiana's law which was upheld by the U.S. Supreme Court in 1987. Over the past few years, state-level protectionist policies have often been used as the last line of defence for U.S.-owned companies resisting unfriendly takeover bids by overseas corporations.[72]

Generally, U.S. trade officials have paid little attention to the dynamic policies now being pursued by state and local governments. In their subsidy negotiations with Canada, these officials must now take time to look in their own backyard and determine which subnational policies are acceptable and which may violate both the spirit and the letter of the Free Trade Agreement. Currently, the U.S. International Trade Commission and the Department of Commerce distinguish between "generally available" government programs and those available only to specific enterprises; or in other words, available "to one company or industry, a limited group of companies or industries, or companies or industries located within a limited region or regions within a country." For the moment, the latter would constitute a harmful subsidy.[73]

In his insightful work on subsidies, Gary Hufbauer suggests the development of a "green list" of acceptable domestic subsidies, a list which would include the following: (1) generally available subsidies involving health benefits, worker training, utilities, roads, and broad tax incentives; (2) adjustment subsidies which are paid strictly for the purpose of downsizing the industry (such as retraining allowances and pension benefits); (3) regional subsidies which solely compensate for demonstrated cost differentials of establishing facilities in the depressed region; and (4) research subsidies, so long as the research findings are released freely into the general body of scientific knowledge or can be licensed by firms of foreign nationality on the same basis as domestic firms.[74]

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[72] This anti-takeover strategy was used by Federated Department Stores against Canadian-based Campeau, Farmers Group Insurance against British-based BAT Industries, and Koppers against British-based Beazer PLC.

[73] Quoted in Andrew Anderson and Alan Rugman, "Subsidies in the U.S. Steel Industry: A New Conceptual Framework and Literature Review," Working Paper No. 14 (Toronto: Ontario Centre for International Business, October 1989).

[74] Gary Hufbauer, "A View of the Forest," in Subsidies and Countervailing Measures, World Bank Discussion Paper No. 55, ed. Bela Balassa (Washington, D.C.: The World Bank, 1989), p. 16.

Even under such a liberalized regime, many questions would remain concerning the acceptability of targeted business attraction, business retention, venture capital, technology development, enterprise zone, and related programs.

TABLE I
DIRECT FINANCIAL INCENTIVES

	Revenue Bond Financing/ State Issued	Revenue Bond Financing/ Locally Issued	Revenue Bond Guarantees	Umbrella Bonds	Grants	Loans and Loan Guarantees	Customized Industrial Training	Enterprise Zones	Equity or Venture Capital Corporations
Alabama		x			x	x	x	x	
Alaska	x			x		x			
Arizona		x						x	
Arkansas		x	x			x	x	x	
California	x	x			x	x	x	x	
Colorado		x					x	x	
Connecticut	x			x	x	x	x	x	x
Delaware	x	x				x	x	x	
Florida		x				x	x	x	
Georgia		x					x	x	
Hawaii	x					x	x	x	
Idaho		x					x		
Illinois	x	x		x	x	x	x	x	x
Indiana	x	x			x	x	x	x	x
Iowa		x		x	x	x	x		x
Kansas		x					x	x	
Kentucky	x	x		x		x	x	x	
Louisiana		x			x	x	x	x	
Maine	x	x	x	x	x	x		x	x
Maryland	x	x	x	x	x	x	x	x	
Massachusetts	x	x	x			x	x		x
Michigan	x	x			x	x	x	x	x
Minnesota		x			x	x		x	
Mississippi	x	x			x	x	x	x	
Missouri	x	x	x	x	x	x	x	x	x
Montana	x	x		x		x	x		x
Nebraska	x	x		x			x		
Nevada	x	x		x		x	x	x	
New Hampshire	x	x				x			
New Jersey	x		x		x	x	x	x	
New Mexico		x			x		x		
New York	x	x	x	x	x	x	x	x	x
North Carolina		x			x	x	x		x
North Dakota		x	x				x		
Ohio	x	x			x	x	x	x	
Oklahoma		x			x	x	x	x	
Oregon	x	x		x	x	x		x	x
Pennsylvania		x			x	x	x	x	
Puerto Rico	x					x	x		
Rhode Island	x		x		x	x	x	x	
South Carolina		x		x		x	x	x	
South Dakota		x				x	x	x	
Tennessee		x					x	x	
Texas		x				x	x	x	
Utah		x			x			x	
Vermont	x	x			x	x	x	x	
Virginia	x	x		x		x	x	x	
Washington		x							
W. Virginia	x	x				x	x	x	
Wisconsin		x			x	x	x	x	x
Wyoming		x		x		x			

Source: NASDA, Directory of Incentives for Business Investment and Development in the United States, 2nd edition (Washington, D.C.: Urban Institute Press, 1986).

TABLE II
TAX EXEMPTIONS, DEDUCTIONS, CREDITS AND SPECIAL TREATMENTS

	Business Inventory	Goods in Transit	Industrial Fuels and Raw Materials	Industrial Machinery and Equipment	Energy and Fuel Conservation Measures	Investment Tax Credit	Job Creation Tax Credit	Pollution Control Equipment	Property Tax Abatement	Research and Development	Sales and Use Exemption	Corporate Income Tax Incentive
Alabama	x	x	x	x				x	x			
Alaska	x	x			x	x						
Arizona	x	x		x	x			x				
Arkansas		x	x	x				x	x			
California	x	x	x	x	x		x	x		x		
Colorado	x		x	x	x	x	x	x	x			
Connecticut	x	x	x	x	x		x	x	x			
Delaware	x	x		x								
Florida	x	x	x	x	x	x	x	x	x			
Georgia	x	x	x	x	x			x				
Hawaii		x	x	x	x			x	x			
Idaho	x	x	x	x	x	x	x	x				
Illinois					x			x	x		x	
Indiana		x	x	x	x	x	x	x	x	x		
Iowa	x	x	x	x	x		x	x	x			
Kansas		x	x	x	x	x	x				x	
Kentucky		x	x	x				x				
Louisiana		x			x		x		x			
Maine	x	x	x	x		x	x	x	x	x		
Maryland	x	x	x	x	x		x	x	x	x		
Mass.	x	x	x	x	x	x		x	x	x		
Michigan	x	x	x	x		x		x	x			
Minnesota								x			x	x
Mississippi	x	x	x	x					x			
Missouri			x	x		x	x	x	x			
Montana	x	x			x	x	x	x	x			
Nebraska	x	x	x	x	x			x				
Nevada	x	x	x					x				
New Hamp.	x			x	x			x	x			
New Jersey	x	x	x	x	x			x	x	x	x	
New Mexico	x	x	x	x								
New York			x	x	x	x		x	x	x		
N. Carolina	x	x	x	x	x			x				
North Dakota	x	x	x		x		x		x			x
Ohio		x	x	x	x	x	x	x	x			
Oklahoma		x	x	x	x	x	x	x	x			
Oregon	x	x	x		x			x				
Pennsylvania	x	x	x	x		x	x	x	x	x		
Puerto Rico												
Rhode Island	x	x	x	x	x	x		x	x	x		
S. Carolina	x	x	x	x	x		x	x	x			x
South Dakota		x	x	x	x				x			
Tennessee	x	x	x	x	x	x		x	x			
Texas		x		x	x				x			
Utah	x	x	x	x	x			x				
Vermont	x		x	x	x			x	x	x		
Virginia	x	x	x	x	x	x	x	x	x	x		
Washington	x	x	x	x	x					x		
W. Virginia			x	x	x	x		x		x		
Wisconsin	x	x	x	x	x	x		x		x		
Wyoming	x	x	x	x				x				

Source: NASDA, Directory of Incentives for Business Investment and Development in the United States, 2nd edition (Washington, D.C.: Urban Institute Press, 1986).

TABLE III
STATE FINANCIAL INCENTIVES FOR BUSINESS: CHANGES BETWEEN 1977-1988

Types of Financial Incentives	Year						Changes Between 1977/88
	1977	1984	1985	1986	1987	1989	
State-Sponsored Industrial Development Authority	32	37	38	38	38	38	+6
Privately-Sponsored Development Credit Corporation	34	38	37	36	37	37	+3
State Authority or Agency Revenue Bond Financing	20	37	41	42	44	44	+24
State Authority or Agency General Obligation Bond Financing	7	12	13	12	14	15	+8
City and/or County Revenue Bond Financing	45	50	49	49	49	49	+4
City and/or County General Obligation Bond Financing	21	30	31	33	33	33	+12
State Loans for Building Construction	19	30	34	35	36	38	+19
State Loans for Equipment, Machinery	13	27	33	34	35	37	+24
City and/or County Loans for Building Construction	8	21	26	29	32	34	+26
City and/or County Loans for Equipment, Machinery	7	22	26	27	29	32	+25
State Loan Guarantees for Building Construction	14	20	26	22	22	25	+11
State Loan Guarantees for Equipment, Machinery	13	21	21	23	23	26	+13
State Financing Aid for Existing Plant Expansion	29	37	39	38	41	42	+13
State Matching Funds for City and/or County Industrial Finance Programs	9	12	15	18	20	20	+11
State Incentive for Establishing Industrial Plants in Areas of High Unemployment	17	24	25	27	31	31	+14
City and/or County Incentive for Establishing Industrial Plants in Areas of High Unemployment	18	28	30	29	31	30	+12

Source: Keon S. Chi, The States and Business Incentives: An Inventory of Tax and Financial Incentive Programs (Lexington, Ky: Council of State Governments, 1989), p. 10.

TABLE IV
STATE TAX INCENTIVES FOR BUSINESS: CHANGES BETWEEN 1977-1988

Types of Financial Incentives	Year						Changes Between 1977/88
	1977	1984	1985	1986	1987	1989	
Corporate Income Tax Exemption	21	28	31	33	33	31	+10
Personal Income Tax Exemption	19	22	24	26	27	28	+9
Excise Tax Exemption	10	16	16	18	19	19	+9
Tax Exemption on Moratorium on Land, Capital Improvements	23	32	34	33	34	35	+12
Tax Exemption on Moratorium on Equipment, Machinery	28	32	34	35	35	39	+11
Inventory Tax Exemption on Goods in Transit	41	46	47	47	48	48	+7
Tax Exemption on Manufacturers' Inventories	37	43	43	44	44	44	+7
Sales/Use Tax Exemption on New Equipment	33	38	42	42	44	44	+11
Tax Exemption on Raw Materials Used in Manufacturing	44	44	45	45	45	45	+1
Tax Incentive for Creation of Jobs	n/a	27	30	31	32	35	n/a
Tax Incentive for Industrial Investment	n/a	24	29	29	30	32	n/a
Tax Credits for Use of Specified State Products	3	6	5	4	6	7	+4
Tax Stabilization Agreements for Specified Industries	4	5	5	5	5	5	+1
Tax Exemption to Encourage Research and Development	9	19	22	24	25	25	+16
Accelerated Depreciation of Industrial Equipment	25	36	34	34	35	35	+10

n/a = not available

Source: Keon S. Chi, The States and Business Incentives: An Inventory of Tax and Financial Incentive Programs (Lexington, Ky.: Council of State Governments, 1989), p. 5.

TABLE V
NEW YORK STATE INCENTIVE AND ASSISTANCE PROGRAMS

Financial Assistance

- Direct Loan Program
- Small and Medium-Sized Business Assistance (SAMBA)
- Targeted Investment Program (TIP)
- Regional Economic Development Loan Program
- Commercial Revitalization Program
- Loan Guarantee Program
- New York Business Development Corporation
- Minority Revolving Loan Fund
- Bonding Assistance Program

Infrastructural Development

- Industrial Access Program
- Regional Infrastructure Development Program

Energy Efficiency Assistance

Special Energy Projects Financing Program

Tax Incentives

- Investment Tax Credit
- Employment Incentive Credit
- Economic Development Zones
- New Business Investment Exclusion and Deferral
- Corporate Franchise Tax Allocation Percentages
- Sales Tax Exemptions
- International Banking Facility Deduction
- Tax Deductions, exclusions, and exemptions
  - Deductions for dividends, interest, and gains from subsidiary capital
  - New York New Operating Loss Deduction
  - Small Business Concern Capital Base Exclusion
  - Deductions for 50% of Dividends from Non-Subsidiary Corporations

Business Assistance

- Permit Assistance
- Business Services Ombudsman Program
- Site and Building Selection Assistance
- Foreign Direct Investment Program

Training

- New Employee Training
- Apprentice Training
- Personnel Services
- Alternatives to Layoffs/Shared Work
- Productivity Improvement
- Basic Industrial Literacy
- Targeted Groups Job Tax Credits

Source: Governor's Advisory Panel on Financial Services, New York's Future in Financial Services (Albany, N.Y.: New York State Office of the Director of Economic Development, 1989), p. 30.

TABLE VI
NEW YORK CITY INCENTIVES:
BUSINESS DEVELOPMENT PROGRAMS

Energy

- Energy Cost Savings Program (ECSP)
- Low Cost Electricity from New York City Public Utility Service
- Energy Management Assistance
- Technical Feasibility Study
- Energy Investment Loan Program

Reduced Taxes on Rental Space

- Industrial Relocation and Retention Program

Relocation Tax Incentives

- Relocation Employment Assistance Program (REAP)
- Tax credits for job creation

Low-Cost Financing

- Tax-exempt industrial development bonds
- Revolving Loan Fund for low-cost subordinated loans
- Use of Federal Urban Development Action Grants (UDAG) to offer flexible below-market-rate subordinated mortgage loan assistance

Reduced Taxes on Real Property

Economic Development Zones (EDZ)

Domestic and International Business Services

New York City's Incentive Programs at Work

Firms moving some or all of their operations from outside the City or from Manhattan below 96th Street to any other part of the city qualify for:

- Up to 22 years relief from paying full real estate taxes in a new or rehabilitated building;
- either a permanent 30% cut in the commercial rent tax or no commercial rent tax for the first 12 years;
- a $500/employee tax credit for firms in new or substantially rehabilitated space;
- rents that are lower than in Manhattan's central business district; and
- up to a 30% cut in electricity and up to a 20% cut in natural gas for 8 years (declining amounts in years 9-12). With additional cuts for 5 years from Con Ed and Brooklyn Union Gas, total cuts range from 37-48%. Other energy programs are available.

If these firms also occupy new space receiving real estate tax abatements or improved space by an investment of at least 50% of assessed value, they also qualify for:

- a 12 year $500/employee annual credit on the general corporation tax, the financial corporation tax, the unincorporated business tax, and;
- a 12 year exemption from the commercial tax rent.

Example: 10 Year Savings with New York City's Incentives Operations Center with 750 Employees in 300,000 square feet:

	1987 $	Net Present Value
Energy*	$18,917,000	$12,963,000
Commercial rent tax cut**	5,487,000	3,636,000
Real estate tax abatement	19,500,000	13,085,000
Per employee tax credit	3,750,000	2,516,000
Total:	**$47,654,000**	**$32,200,000**

*Compared to standard utility rates for 13MW.
**Assumes an average of $30/square foot rent over 10 years.

Source: Governor's Advisory Panel on Financial Services, New York's Future in Financial Services (Albany, N.Y.: New York State Office of the Director of Economic Development, 1989), p. 31-32.

TABLE VII
CALIFORNIA EXPORT FINANCE OFFICE LOAN GUARANTEES
(Cumulative Activity through October 31, 1989)

	LOAN GUARANTEES		PRELIMINARY COMMITMENTS
	# of Guarantees	Export Sales Supported	
Total by Units	181		228
Total by Dollars	$34,648,085	$154,149,063	$45,930,831
INDUSTRY			
1. ETC/EMC	8,780,915	58,736,905	9,939,240
2. High-Tech	9,555,916	42,159,924	15,036,874
3. General Manufacturing	11,635,329	34,629,797	13,982,479
4. Food & Agriculture	3,504,770	13,980,670	5,101,083
5. Aerospace	276,250	1,428,972	976,250
6. Services & Misc.	894,905	3,212,795	894,905
DESTINATION			
1. Asia	16,052,524	80,929,463	21,521,132
2. Europe	7,375,562	28,148,801	10,314,562
3. Latin America/Caribbean	1,582,075	5,230,675	2,586,575
4. Africa	1,534,574	8,818,276	1,176,149
5. Middle East	4,344,428	19,148,391	5,559,741
6. Canada	2,247,929	3,310,333	2,597,929
7. Australia/New Zealand	1,510,993	8,563,124	1,574,743
CALIFORNIA REGIONS			
1. Northern California	0	0	442,000
2. Bay Area	8,566,708	43,461,108	10,541,253
3. Central Coast	690,000	3,538,805	1,730,000
4. Central Valley	2,397,250	6,473,726	2,768,063
5. Los Angeles Megalpolis	16,660,593	71,511,612	21,150,506
6. Orange County	3,130,307	14,541,014	4,864,132
7. Inland Empire	484,950	659,685	835,350
8. San Diego & Imperial Co.	2,718,277	13,963,113	3,599,527

Source: California World Trade Commission

TABLE VIII
STATE FOREIGN TRADE DEVELOPMENT PROGRAMS, 1989

	Seminars/Conferences	One-on-one Counseling	Market studies prepared	Language Bank	Referrals to local export services	International newsletters	How-to handbook	Sales leads disseminated	Trade shows	Trade missions	Number of foreign offices	Operational financing program	Governor's international advisory committee	International joint ventures
Alabama	x	x	x	x	x	x		x	x	x	5		x	x
Alaska	x	x		x	x	x		x	x	x	2	x		
Arizona	x	x	x			x		x	x	x	1			
Arkansas	x	x	x	x	x	x		x	x	x	3	x		
California	x	x	x	x	x	x		x	x	x	3	x	x	x
Colorado	x	x	x	x	x			x	x	x	2	x	x	
Connecticut	x	x	x		x	x		x	x	x	2	x		x
Delaware	x	x			x	x		x	x	x	2		x	
Florida	x	x	x		x	x		x	x	x	4		x	x
Georgia	x	x	x		x			x	x	x	4			
Hawaii	x	x			x			x	x	x	2			
Idaho	x	x	x	x	x	x	x	x	x	x	1			
Illinois	x	x	x		x			x	x	x	7	x	x	x
Indiana	x	x	x	x	x			x	x	x	6	x	x	x
Iowa	x	x	x	x	x		x	x	x	x	3		x	
Kansas	x	x		x	x	x	x	x	x	x	2			
Kentucky	x	x			x	x	x	x	x	x	2		x	x
Louisiana	x	x	x		x		x	x	x	x	4	x	x	
Maine	x	x	x		x	x	x	x	x	x	0	x	x	x
Maryland	x	x	x		x	x	x	x	x	x	2	x	x	
Mass.	x	x	x		x	x	x	x	x	x	2		x	
Michigan	x	x	x		x	x		x	x	x	4	x	x	x
Minnesota	x	x			x	x	x	x	x	x	8	x	x	x
Mississippi	x	x	x		x			x	x	x	4			
Missouri	x	x	x		x			x	x	x	3		x	x
Montana	x	x			x			x	x	x	2			
Nebraska	x	x		x	x		x	x	x	x	0			x
Nevada	x			x	x	x			x	x	2		x	x
New Hamp.	x	x			x		x	x	x	x	0			
New Jersey	x	x			x	x		x	x	x	2	x	x	x
New Mexico	x	x			x		x	x	x	x	0		x	
New York	x	x			x	x	x	x	x	x	5	x	x	x
N. Carolina	x	x	x	x	x	x		x	x	x	4		x	x
N. Dakota	x	x	x	x	x		x	x	x	x	1		x	x
Ohio	x	x	x	x	x	x		x	x	x	4			
Oklahoma	x	x	x	x	x	x	x	x	x	x	5		x	
Oregon	x	x	x		x	x	x	x	x	x	3		x	
Penn.	x	x	x		x	x		x	x	x	3	x	x	x
Puerto Rico	x	x	x		x	x		x	x	x	2		x	
Rh. Island	x	x	x		x	x		x	x	x	2			
S. Carolina	x	x		x	x	x		x	x	x	2		x	x
S. Dakota	x	x	x	x	x			x	x	x	0		x	x
Tennessee	x	x			x		x	x	x	x	0	x		
Texas	x	x			x		x	x	x	x	2	x	x	
Utah	x	x	x	x	x			x	x	x	3			
Vermont	x	x	x	x	x			x	x	x	2			
Virginia	x	x	x		x	x		x	x	x	5	x	x	x
Washington	x	x		x	x	x	x	x	x	x	1	x		x
W. Virginia	x	x	x	x	x	x		x	x	x	0	x		x
Wisconsin	x	x			x	x	x	x	x	x	4		x	
Wyoming	x	x	x		x	x			x	x	2	x	x	

Source: Office of State Services, International Trade (Washington, D.C.: National Governors' Association, 1989).

TABLE IX
AN INVENTORY OF ECONOMIC DEVELOPMENT PROGRAMS SPONSORED BY U.S. STATE AND LOCAL GOVERNMENTS

Accelerated depreciation on equipment
Alternative energy assistance
Biotechnology centres
Business incubators
Construction loans
Corporate income tax exemptions
Energy discounts
Enterprise zones
Entrepreneurial training
Equity financing
ESOP assistance
Excise tax exemptions
Export leads
Export counselling
Export seminars
Export missions
Export financing
Goods in transit exemptions
Government procurement preferences
Industrial parks
Infrastructure improvement grants
Interest subsidies
Inventory tax exemptions
Lines of credit
Loan packaging
Loan guarantees
Management assistance
Market studies
Movie production incentives
New job tax credits
New investment tax credits
Personal income tax exemptions
Pollution control assistance
Property tax exemptions
Public infrastructure development
Public utility subsidized loans
Public pension fund investment pools
Raw materials tax exemptions
Referral services
Regulatory relief
Research parks
Research and development assistance
Revolving loan funds
Royalty agreements
Rural economic development promotion
Sales/use tax exemptions
Site preparation grants
Site preparation loans
Site selection services
Small business development centres
Tax increment financing
Tax-exempt industrial revenue bonds
Taxable industrial revenue bonds
Technical assistance
Technology transfer assistance
Venture capital funds
Water and waste disposal assistance
Worker training grants
Worker training loans
Working capital loans

TABLE X
VOLUME OF STATE AND LOCAL
PRIVATE ACTIVITY TAX EXEMPT BONDS
BY INDUSTRY, 1983-1986*
(millions of dollars)

Industry	1983	1984	1985	1986
Agriculture, forestry, and fishing	197	208	364	116
Mining	98	107	236	30
Construction	129	187	1427	180
Manufacturing	4237	6075	6620	1859
Food and Kindred products	474	553	696	181
Textile products	333	451	249	85
Chemicals, rubber, and plastics	645	902	1194	337
Primary and fabricated metal	655	970	883	236
Machinery, except electrical	301	379	394	134
Electrical and electronic equipment	441	649	448	130
Other manufacturing	1389	2170	2752	756
Transportation	325	468	2500	584
Wholesale trade	797	1059	1338	462
Durable goods	378	555	572	238
Nondurable goods	419	504	765	224
Retail Trade	1419	1491	1046	414
General merchandise stores	412	429	255	90
Food stores	420	347	254	80
Other retail trade	588	714	536	244
Finance and insurance	273	363	940	94
Real estate	2931	4305	22059	2885
Services	16179	17427	23932	3984
Hotels and other lodging places	948	1220	1427	852
Personal and business services	243	264	276	100
Medical and health services	12570	12762	16894	2498
Educational services	1882	2338	4209	235
Other services	535	842	1126	299
Other industries	556	128	9483	24928
Industry not reported	3092	2162	4234	N/A

* Includes only small-issue and other industrial development bonds and private-exempt entity bonds. Some figures have been rounded to the nearest whole number.

N/A = not available

Source: U.S. Department of the Treasury, Internal Revenue Service, SOI Bulletin, Summer 1984, Winter 1985-86, Spring 1987, Summer 1988.

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